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# The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

(The Mining Journal is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.)

No. 2296.—Vol. XLIX.

LONDON, SATURDAY, AUGUST 23, 1879.

WITH SUPPLEMENT. PRICE SIXPENCE PER ANNUM, BY POST, 21 4s

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25 East Van, £1 5s.	30 Morfa Du, 16s.	Amalgamated, 4s.
25 Eberhardt, £2 3 4	30 Pestana, 4s.	10 W. Assheton, 18s. 9d.
25 Frontino, £2 3 4	30 Parys Corporation, 10s.	10 Wye Valley, 12s. 6d.
25 Herodfoot, £2 3 4	150 Penrithal, 1s. 3d.	20 West Chiverton, all
100 Javali, 6s. 9d.	10 Richmond, £7 3 4	calls paid, 25s.

\* SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.)

RAILWAYS—SPECIAL BUSINESS.

FOREIGN BONDS—SPECIAL BUSINESS.

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ESTABLISHED 1842.

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50 Almada, 7s.	20 Frontino, £2 2s. 6d.	100 Pestana, 4s. 3d.
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3 Dolcoath, £28 3 4	20 Morfa Du, 16s. 6d.	40 Wheal Grenville, £4 3 4
30 East Van, 25s. 6d.	5 Miners, 10s.	40 West Holway, 10s.
5 East Pool, £13 3 4	150 Nouveau Monde, 15	25 West Peavor, £3.
40 East Caradon, 9s.	150 Port Phillip, 9s. 6d.	5 West Chiverton.
25 Eberhardt, £2 1s. 6d.	60 Parys Copper, 10s.	

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40 Don Pedro, 9s.	65 Glyn and Van Consols	5 Miners, £2 3 4, cum div
10 Devon Consols, £1 15	United, 9s.	60 Parys Corporation, 10s
25 Eberhardt, £2 3 4	20 Gorseod, £1 7s. 6d.	100 Penrithal, 1s.
20 East Van, 17s. 6d.	50 Herodfoot, £2 2s. 6d.	5 Van, £15 3 4
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50 Flagstaff, 5s.	200 Pestana, 4s. 9d.	50 York Peninsula pref, 10s. 3d.
25 Leadhills, £1 17s. 6d.	25 Morfa Du, 15s.	
25 Herodfoot, £2 5s. 6d.	15 Richmond, £7 3 4	
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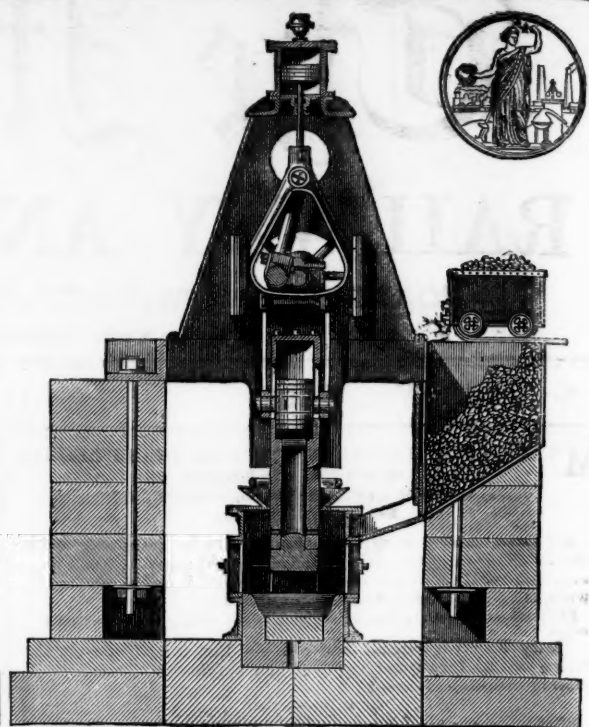
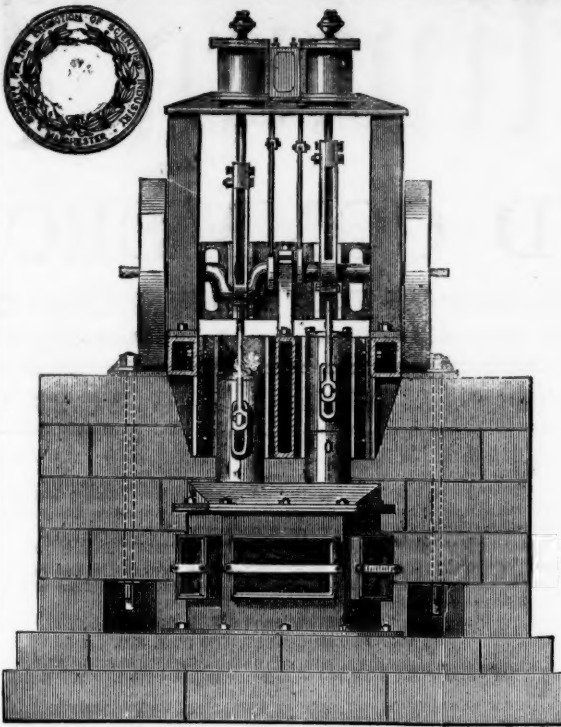
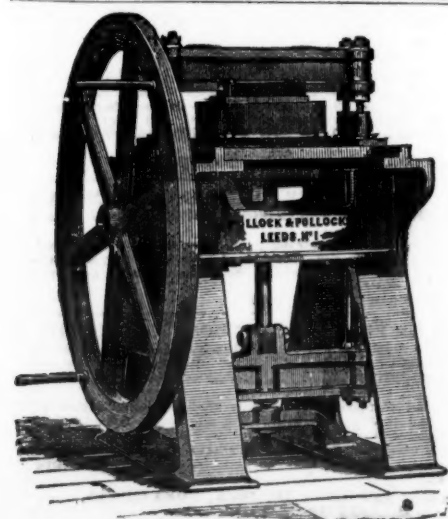
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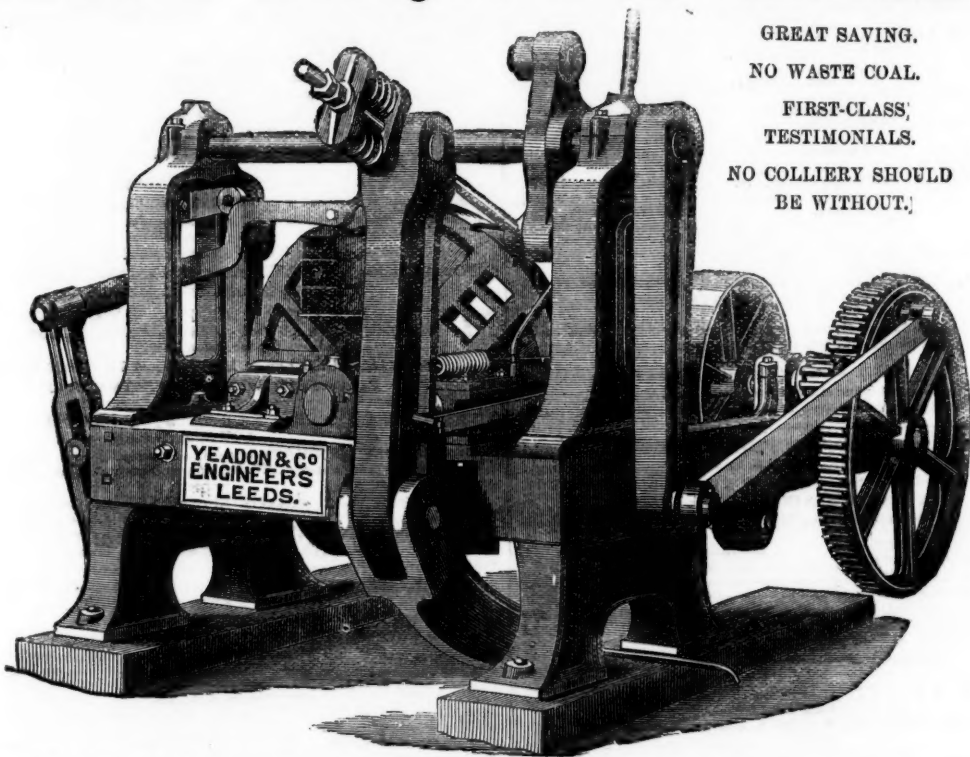
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## Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES.\*—No. CXXVII

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,

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## SECTION IV.

## SIDE OVERSTOPPING.

When the width of a lode exceeds 15 ft., especially in the case of understopping, the workings become dangerous, owing to the liability of portions of the ground or attle packing crushing in. In the case of wide lodes this difficulty is got over by the methods we have called side overstoping, side understoping, and cross stoping. Side overstoping consists in working away at first only one half, or one third, or one fourth of the width of the lode, according to the greater or less thickness.

In Mr. Beckwith's mine, Isle of Man, where the lode is from 30 to 40 ft. in width, the mineral is obtained by working half the lode at a time. The level is driven in the lode close to the lying wall, and a cross-cut is driven every 8 to 12 fathoms to the opposite wall of the lode, where a level is started in opposite directions of half the width of the lode. When the levels have been carried through from one cross-cut to the other they are strongly timbered, and then packed with attle. A second stage is then worked out above, and packed with attle, and then a third, and so on up to the level above. When the half of the lode on the hanging side has thus been worked out the remaining half, on the lying side, is worked out in the same manner. In this mine the bunches and strings of ore lie chiefly on one side of the lode. At the Foxdale mines, in the Isle of Man, the lodes are 30 to 40 ft. wide, and contain diffused galena in soft clay-slate. The workings are similar to those in Mr. Beckwith's mine, except that it is opened out by levels on both sides of the lode, the two halves of the lode being got separately.

The wide lodes in the Harz district, especially in the neighbourhood of Lautenthal, are worked out in three or four separate divisions of from 8 ft. to 10 ft. in width. The lodes are opened out generally by means of levels on the lying side, and the first 8 ft. to 10 ft. of the lode next the lying wall is worked away by means of overstoping. When the working of this strip is so far advanced that three (or more) stopes have been opened out, the second, 8 ft. to 10 ft. next the lying wall, are then attacked, and opened out with stopes in the same manner. If the lode is from 25 to 30 ft. wide this will form the middle strip of the lode. When this strip has been so far advanced that three (or more) stopes have been opened out, and the first strip so far advanced that six (or more) stopes have been opened in it, the working away of the third, or last strip, according to the width of the lode, is commenced. In this manner the whole width of the lode is excavated. A cross section of the lode will then show, as it were, a side or cross stoping arrangement, with three or more stopes, according to the width of the lode, the roof of these stopes being from 8 to 10 ft. long, and the face three times the depth of one of the longitudinal stopes (the working stopes). The lower two-thirds of the face of these stopes are covered by attle packing, so that no access can be obtained from one series of stopes (one division of the lode) to another, except at the shaft or cross-cut. When passes are used to pass the ore from the stopes down into the level below it will be evident that when they are carried vertically upwards they will pass first through and serve the first division or set of stopes, and as they are carried higher through the middle portion of the lode will serve for the second set of stopes; and, lastly, when it reaches the opposite side of the lode it will serve for the last set of stopes. The lowest or first stope of the series next the hanging wall will communicate with the level by a number of cross-cuts left timbered through the attle. The level being driven in the lying side of the lode, the attle rests directly upon the solid portion of the lode below, so that when the next lower portion of the lode is being worked up to the attle packing above the last portion will require to be got with spilling timber, to prevent the attle crushing in on the men below. The roof and hanging side of each stope will consist of the solid unworked portion of the lode, whilst the floor and lying side will be formed of attle packing, hence it will generally be necessary to timber the lying side, and it is on this account that the stoping is commenced on the lying side of the lode, since otherwise the attle packing would form the hanging side of the stopes, and require more timber. When the lode is but slightly inclined, and the attle carefully packed with the larger pieces on the hanging side, so as to form the lying side of the stopes of the next following set, the use of timber may be avoided altogether. The same object is sometimes attained by working the lode away, not on the full dip of the lode, but with a slight inclination, so that there is less tendency on the part of the attle packing to slip into the open space of the stope.

**SIDE UNDERSTOPING.**—Exactly corresponding to the above modification of overstoping, wide lodes can be worked by a similar modification of understoping, which we have called side understoping. As will be at once evident, by this arrangement the roof and hanging side of the stopes will be formed of attle packing, and both will require well timbering. This objection is so fatal that side understoping may be practically said to exist only in name, and it is difficult to imagine any conditions under which its use is likely to be more advantageous than the modes of side overstoping or cross stoping.

**FACE STOPING.**—This may be considered as a modification of overstoping, in which each stope is carried forward to the limit of the division opened out (to the next shaft) before the second stope is commenced, and likewise this second stope completed before the third is commenced, and so on until the whole of the deposit is worked out to the next level above. As will be at once evident, the number of working places is vastly reduced for a given area opened out, and hence the production is limited. It is only of local importance, being the method used for working some of the highly inclined (not under 40°) coal seams of Westphalia, which are of considerable thickness, or where the roof breaks down pretty readily on the excavation of the coal.

The division is opened out by means of a level driven to or past the limit of the division. A parallel, or covering off, level is driven at the same time on the rise side, so as to keep a safety pillar for the road. The covering off level is driven from a steep jig brow, which forms the limit (nearest to the shaft) of the division. At a distance of 9 to 10 yards from the jig brow an inclined road is driven to the rise, to connect the main and covering off levels. This inclined or diagonal road is continued forward, past its junction with the covering off level, till a face, or stope, 9 to 10 ft. in width is obtained, and the coal is then stoped or worked out to the end of the covering off level, which terminates in a second jig brow. Another face or stope, 9 to 10 ft. in height, is then covered off, and brought back to the near end, where it is terminated by the continuation of the diagonal road. A third face, or stope, of 9 to 10 ft., is then opened out by continuing the diagonal road, and this stope is carried forward to the end of the division opened out, the fourth face, or stope, being brought back from the second jig brow. When owing to the diagonal direction of the diagonal road the pillar left between it and the jig brow becomes too great, a second covering off level is driven through the solid pillar from the jig brow, and when this has advanced a sufficient distance (8 to 10 yards) a diagonal road is started from this level. When owing to the divergence of the diagonal road and the covering off levels (which are at the point where they join each other, driven as a single road, with a gradually enlarging width of working face), the width of the working face becomes 9 to 10 ft., this width is stoped out to the end of the division, parallel to the main level, or the covering off levels. The second covering off level set off at a

proper distance up the jig brow, the last portion stoped out from the first covering off level will be close to the first portion stoped out from the second covering off level. The coal between the second and third covering off levels is stoped out in exactly the same way as that between the first and second covering off levels. The dirt and stone which fall in from the roof of the goaf (the hanging wall of the seam) are levelled to form a roadway; the inclined road, having solid coal on the one side, is kept open on the other by packing the stones more carefully to form a wall. When the working away of the coal has advanced so far that there is insufficient material to pack the excavated space fully enough to keep the road (formed by levelling the fallen stones) sufficiently near to the working places to serve as a conveyance road; and when also the surface of open unpacked ground becomes so great as to render it dangerous to the colliers working at the coal stopes, it becomes necessary to have a pillar of coal of sufficient thickness, and to commence entirely anew from a level on the rise side of the pillar.

**CROSS STOPING.**—According to Lottner this mode of working was introduced as early as the year 1749 by the mine manager, Herr Zisper, and for the purpose of working the well known Spitaler Lode, in Hungary; and although it has now been almost discontinued for working the Spitaler Lode, it is still a favourite method for working out highly inclined and wide lodes, and massive deposits, such as we have included under the term Stockwerke. Cross stoping, or, as it is sometimes called in this country, the sectional method, may be described as that mode of stoping in which the stopes are carried forwards across the lode, and so that the stopes, which are arranged in the usual step-wise fashion, are all in the same horizontal plane.

The mode used in working the Spitaler lode may be described as follows:—The lode is reached by means of cross-cuts every 20 fms. in depth, driven from the shaft, to intersect the lode. If the shaft has not been sunk at once on the lying side of the lode—so that between the surface and the point where the shaft intersects the lode all the cross-cuts reach the lode first on the hanging side—the cross-cuts are then continued forward through the lode to the lying side, when the lode is opened out by levels driven right and left close to the lying side. The cross-cuts from the lower portion of the shaft will reach the lode first on the lying side; at the end of the cross-cuts levels will be at once driven right and left in the lying side. In this manner levels will be opened out by levels 20 fms. apart, driven in the lying side, or partly in the lode and partly in the country rock forming the lying side, so that the water can be carried off without being liable to sink through the lode to a lower level. If it is desired to leave that portion of the lode in the same vertical plane as the shaft and the cross-cuts intact the working away of the lode is commenced somewhat to the right and left of the place where the cross-cuts meet the lode. According to the character of the lode will depend whether the stopes are driven with a step-wise arrangement, or, as in last-described method, face stoping, the stopes are driven separately to the opposite side of the lode. When the lode is sufficiently compact the first method is adopted. The commencement is made by driving a stope, from 8 ft. to 10 ft. wide, and from 6 ft. to 8 ft. in height, from the level towards the hanging-wall. When this first stope has advanced sufficiently, 4 yards or more, a second stope of the same dimensions is commenced, and when this second stope has advanced the same amount a third stope is commenced. In this manner the workings when looked at in plan assume the step-like arrangement characteristic of stoping. The attle is packed behind as the stopes advance towards the hanging-wall. The level on the lying side of the lode is well timbered, and lagged on the roof and hanging side, to prevent it being crushed in and filled up by the attle packing.

## THE ISTHMUS OF PANAMA.

Whatever difference of opinion may exist as to the desirability of the precise route chosen by Mr. Ferdinand de Lesseps and his engineers, there can be no question that a ship canal across the isthmus of Panama is perfectly practicable, and has every prospect of being sufficiently remunerative to those who undertake its construction to ensure the cordial support of capitalists, and it must be particularly gratifying to find that the proposed route from Navy Bay to the estuary of the Rio Grande has been recommended for nearly half a century as the most desirable and practicable route across the isthmus. In connection with the subject, Capt. George Peacock has just issued a very interesting series of notes,\* and the information afforded cannot fail to prove of considerable value to those intending to invest in the enterprise. Between 1831 and 1842 Capt. Peacock crossed the isthmus five times. Capt. Peacock at the first blush of his explorations had an idea that the river Chagres itself might be made available for a canal by sheet piling and embanking the river in its centre excavating, dredging one of the halves of the piled embankment to the natural bank of the river, but on exploring beyond Gatun and finding the Chagres so tortuous, he considered this plan impracticable, and thought that a canal from Port Limon as straight as it could be made to the estuary of the Rio Grande on the usual method of cutting would be preferable, and that its length, including meandering to avoid rocky ground, &c., would be about 32 to 35 miles, perhaps less, and that the deepest cutting required might not exceed 150 to 200 feet at the highest points of the water sheds. The precise figures can of course only be ascertained by levelling, &c., but Capt. Peacock is quite satisfied from his personal explorations that no tunnelling would be necessary, and that the deep cuttings would neither be extensive nor numerous.

Somewhat similar views were expressed by Dr. Cullen, another old correspondent of the *Mining Journal*, about 25 years ago, that a ship canal was perfectly practicable across the isthmus, and that the best route was from Caledonia Bay to Fuerte del Principe. The project was fully noticed in the *Mining Journal* of Jan. 22, 1853, and it was mentioned that Dr. Cullen proposed the line from Port Escoscos at the head of the Gulf of Darien, on the Atlantic side of the isthmus to the Gulf of St. Miguel, by the River Savana, on the Pacific. The entire length of the canal would be 39 miles, of which the portion to be cut would be from 22 to 25 miles, and of this latter, again, only 3 or 4 miles would be deep cutting. It was pointed out that it should be completed on a style of grandeur commensurate with its important uses—cut sufficiently deep to allow the tide of the Pacific to flow right through it to the Atlantic, so that ships bound from the former to the latter would pass with the flood, and those from the Atlantic to the Pacific with the ebb tide of the latter. The advantages claimed for the route were—"its shortness, the excellence of its harbours, the low elevation of the land, the absence of bars at the Savana and Tuyra mouths, the depth of water and great rise of tide at the former, its directness of course and freedom from obstruction, the healthiness of the adjacent country, the exemption of the coasts from north winds and hurricanes, the capability of cutting a canal without locks, and the absence of every engineering difficulty."

Although the general direction of the canal has been decided upon it must be assumed that no active operations would be commenced until abundant preliminary surveys have been made, for Mr. F. de Lesseps is far too experienced an engineer to finally determine the exact route upon any such flying surveys as have yet been made. It is sufficient to know that the project is worthy of attention, that it has been conclusively proved that a ship canal across the isthmus is practicable, and that the assistance of a man of the energy and experience of Mr. F. de Lesseps has been secured for carrying it out, and this being known capitalists will have a far better prospect of success by refraining from demanding a defined scheme of details—for the expenditure of a few thousands in money and a few years in time for a series of surveys might make the difference between failure and a complete success. That Mr. Peacock was one of the earliest projectors of a ship canal across the Central American isthmus none would be more willing than Mr. F. de Lesseps to

admit, and Capt. Peacock would certainly be entitled to more than mere credit if his suggestions of 1831 prove worthy of adoption. His volume contains details which would be of much value to all engaged in elucidating the subject, and might lead to the selection of a route which would not only have the advantage of an absence of locks, but also be free from the ship-tunnel, which many of the most competent engineers consider unnecessary, if not entirely impracticable.

## ANNUAL RECORD OF SCIENCE AND INDUSTRY.

It has now become so customary for scientific questions to be raised in ordinary conversation amongst the educated classes that it is absolutely necessary to keep oneself posted as to what is going on not only in one's own country and in the particular science in which one takes an interest, but in all parts of the civilised world and in all sciences which are either directly or indirectly connected with the science studied. To attempt to acquire this knowledge by reading the innumerable scientific memoirs communicated to the various scientific societies in various languages, and published in all kinds of forms and places, is practically impossible; and such works as the *Annual Record of Science and Industry*,\* which has for some time past been prepared by Mr. Spencer F. Baird of the Smithsonian Institution, afford the only substitute for the extensive course of reading indicated. From the character of the Institution with which Mr. Baird is connected he has probably greater facilities for collecting material for his volume than could be claimed elsewhere, whilst his own experience and the assistance he has obtained from men of high repute in the several sciences dealt with afford a guarantee that all important facts will have been recorded.

The section of astronomy has been entrusted to Mr. E. S. Holden, of the U.S. Naval Observatory at Washington, who has evidently spared no trouble to make the record complete though concise. An important feature of the astronomical summary in the present volume is the reports from American observatories furnished by the directors themselves in answer to a circular letter. It is hoped that by means of these replies accurate knowledge of the activity of the American observatories may be had, and it is intended to continue these in future. A similar series of reports for European observatories is yearly made to the German Astronomical Society. Condensed translations of these are given in Mr. Baird's volume. The physics of the earth section has been undertaken by Mr. Cleveland Abbe of the Army Signal Office. As to internal temperature he says that the temperatures in the St. Gothard Tunnel have been accurately observed by the engineers, and their observations discussed by Staff and Hann. They, however, can give little or no reliable information as to the temperature of the earth in its interior, and the whole of our present knowledge on this subject is thoroughly unsatisfactory. Mr. William Morris, of Earl's Hill Colliery, publishes an earnest remonstrance against accepting temperatures of the ground as observed in coal mines as having anything to do with the temperature of the earth at that depth; such figures according to him are wholly dependent on the ventilation of the mine—the portion of this section relating to the ocean has been prepared with the assistance of Commander E. P. Lull of the U.S. Navy. The section of Physics is written by Prof. G. F. Barker of the University of Pennsylvania. It is herein stated that electric lights have become quite numerous in Paris, but it might have been added considering the date of the publication of the book that a careful trial proved them to be a failure. Those originally interested in the patents may congratulate themselves that before the collapse at Paris the Russian, English, and other patents were sold, and the credulous purchasers with them. It is probable that Aug. 14 will be the last day upon which at least any yet discovered electric light will be seen in public use. The light is non-diffusive and very unreliable, and this statement refers equally to all which have yet been seen either in Europe or America.

The section of chemistry is also undertaken by Prof. G. F. Barker; mineralogy, by Dr. E. S. Dana of Yale College; geology, by Dr. T. Sterry Hunt, F.R.S.; hydrography, by Lieut.-Com. Francis M. Green, U.S.N.; geography, by the same; microscopy, by Prof. Hamilton L. Smith of Hobart College, Geneva, N.Y.; anthropology, by Prof. Otis T. Mason of Columbian University, Washington; zoology, by Dr. A. S. Packard, jun., of Brown University, Providence, R.I., so far as regards the general science and invertebrates; vertebrate zoology, by Prof. Theodore Gill of Washington; botany, by Prof. W. G. Farlow of Boylston Hall, Harvard College; agriculture and rural economy, by Prof. W. O. Atwater of the Wesleyan University, Middletown, Conn.; and engineering, technology, and industrial statistics, by Prof. W. H. Wahl of Philadelphia. Sections are also devoted to necrology and bibliography, and there is an excellent alphabetical index.

Although the contributors are so numerous, and they are so widely separated from each other, they have worked most harmoniously, so that one style has been followed throughout; and as the system adopted by each writer has been to weave the almost innumerable statements of facts into a continuous narrative, so that the entire 700 pages can be read through without becoming tedious, whilst the amount of information that can be obtained is almost inestimable. The volume is in every respect equal to any of its predecessors, and is well deserving of an extensive circulation.

## THE MODEL LOCOMOTIVE ENGINEER.

The details of a dry subject can often be imparted by means of a popular narrative to those who would not think of troubling themselves with a mere systematic record, and a well written record is sometimes interesting and readable, although very few new facts are given. In the volume now under consideration Mr. Reynolds devotes a large proportion to the history of the pioneer engineers and to the early history of the locomotive, yet there is sufficient newness in the style to ensure its being read with pleasure by those for whom it is intended—those practically engaged in connection with railways and locomotives, and it forms a satisfactory introduction to the chapters which form the main object of the book—that of teaching engine boys, firemen, and engineers to pay the utmost attention to their work, and advocating the grant to them of certificates of competency. He states that as now constituted the service is unpopular. Hundreds of men go into the steam sheds in a year who in a few weeks go away disgusted. The ground is perished for want of cultivation. It is proposed to grant third, second, and first-class certificates to engineers according to ability and experience, and similar classes of certificates to firemen and engine boys. He suggests that for each grade corresponding uniforms should be provided, and he opines that the standing of the service would be raised 50 per cent. in a short time.

The portion of the volume specially devoted to the question of certificates of qualifications in the running service of the locomotive department is calculated to prove of great utility to the men themselves, even should the recommendations as to certificates never be adopted, for instruction is given upon every point from the lighting of the fire to the completion of the journey and cleaning of the engine ready for the next trip, whilst by way of appendix there is an excellent account of continuous brakes generally, and of the Westinghouse in particular. He mentions that in order to stop a train in the shortest possible distance Capt. Douglas Galton considers that the brake blocks should act upon every wheel in the train, that they should be applied with their full force in the least possible time, and that the pressure should be regulated according to speed and other circumstances, and should never exceed the adhesion of the wheels upon the rails. It might have been further pointed out that if the brakes be applied consecutively instead of simultaneously, commencing with the last coach or wagon and coming regularly forward, shock is almost entirely prevented, however quickly the whole of the brakes may be got into action. The

\* Being Notes on a Course of Lectures on Mining, delivered by Herr Berggrath Dr. von Schroeder, Director of the Royal Bergakademie, Clausthal, the Harz, North Germany.

\*\* Notes on the Isthmus of Panama and Darien; also on the River San Juan, Lakes of Nicaragua, with reference to a railroad and canal for joining the Atlantic and Pacific Oceans. By Capt. GEORGE PEAOCK, F.R.G.S., &c. Exeter: W. Pollard, North-street.

\* "Annual Record of Science and Industry for 1878." Edited by SPENCER F. BAIRD, with the assistance of eminent men of science. New York: Harper and Brothers. London: Trübner and Co.

† "The Model Locomotive Engineer, Fireman, and Engine Boy." By MICHAEL REYNOLDS, M.S.E. London: Crosby Lockwood and Co., Stationers' Hall court.



volume is of a thoroughly practical and useful character, and should be placed by every railway company within the reach of the members of their running service, as the more its contents are known in the engine sheds the greater will be the advantage to the companies.

**SCIENTIFIC PRESS SUPPLEMENT.**—With a view to bring together in a compact and readily accessible form the proceedings of the various scientific societies of California, and to furnish to the scientists of the State a record of the progress in other countries of the sciences to which they devote themselves, Messrs. Dewey and Co., San Francisco, commenced in February the publication of a monthly Scientific Press Supplement, and Messrs. Trübner and Co., of Ludgate Hill, have undertaken the agency for it in this country. The new work was more required as, the California Academy of Sciences not publishing their proceedings, the value of the paper read was lost except to the members attending the meetings. In the Scientific Press Supplement the papers will be printed in full whenever possible, and as the proofs will be submitted to the authors before publication accuracy may be relied upon; and, as the leading scientists of the Pacific Coast have promised to contribute articles, and the abstracts and translations of foreign publications are excellent, there is no doubt the periodical will be extensively patronised. In the first three numbers there are some very valuable articles, and the admirable illustrations which accompany them much enhance their interest. An excellent paper, by Dr. H. W. Harkness, reporting a case of timber destruction by a fungus which penetrates the growing tree, and honeycombs its heart without leaving any exterior marks, is given, and mention may also be made to papers on Insanity and Crime in Mining Countries, by the Hon. Alex. Del Mar, in which it is mentioned that there were 103 suicides in San Francisco last year. Of these more than 25 per cent. are attributed to losses in mining stocks, &c.; 14 to intemperance; and nearly 10 per cent. each to love and incurable disease. Love appears to be 25 per cent. less productive of suicide in women than in men, and there are no female intemperate suicides. Mr. Stillman, of the University of California, contributes a paper on the Artificial Synthesis of Organic Compounds, Geodetic Instruments of Precision at the Paris Exhibition and in European workshops; Artesian Wells; Foot hills of the Sierra; New Problems in Mensuration; the Genesis of Climatic Deposits; the Proceedings of the California State Geological Society; on Extinct Volcanoes and their relation to the Glacial Drift; on Bernardino, a new mineral resin from San Bernardino County, California, by Mr. J. M. Stillman; and on Cheap Railways are among the titles of papers inserted, and these will suffice to show the wide range of subjects mentioned. Messrs. Dewey and Co. have undertaken a task the performance of which will be of great benefit to the scientific societies, and to the people of California and scientists in this country, so that it may be hoped commercial success will attend their efforts.

### Meetings of Public Companies.

#### WHEEL BASSET MINING COMPANY.

A general meeting of the shareholders was held at the mine on Aug. 14. Mr. McKENDRICK in the chair.

The usual preliminaries having been disposed of, the statement of accounts was submitted, showing a debit balance of 46977. 15s. 5d. Mr. R. MARTIN (the purser) said that there was 20744. calls to come in, which he considered would reduce their liabilities to about 26000. They had also much standing plant that could be disposed of, and most of that on North Basset workings was paid for.

Capt. TREVENA expressed sanguine expectations that the bottom of Lyle's shaft would be reached in three months, and that they would then be in a position to drive on the lode.

Mr. WADDINGTON said a call of 7s. per share was necessary to balance their account, and they would then be solvent.

The CHAIRMAN, after referring to the operations of the last seven months, remarked that their accounts presented that day hardly represented them in such a good position as they really were. They had on the relinquished share account between 2000. and 3000. which did not appear on the balance-sheet, and altogether they were 4000. better off than they were credited for. It would be necessary to make a call that day, and some shareholders who had recently come into the concern suggested that 10s. a share should be asked for. He did not fall in with that proposal, as they had some old adventurers still identified with the mine, who had responded nobly to the calls made upon them, and the committee would like them to retain their interest, so that they might have a chance of recouping themselves in the new mine. The loss on the past seven months' working had been 20100. and to meet this and other expenses he moved that a call of 7s. per share, payable on Sept. 5, be made. He thought that before long the shareholders would receive a dividend, for the mine was a good one, and second to none in the country. He subsequently referred to the liberality of Mr. Basset, the Lord of the Manor, towards the mine, mentioning that for the past five or six years they had had comparatively no dues to pay, and this was a good thing for the mine. Not only had he done this, but he had assisted them in many other ways.

Mr. WADDINGTON expressed his belief that the success would be experienced long before they anticipated. It would come at a time when it would be more to their interests than had it been attained two or three years ago. He did not think, however, that the present generation would see metal realising the high prices it did formerly, but that there would be a great improvement on the present tariff he did not hesitate to say.

The call was then agreed to, and the proceedings terminated.

#### BIRDSEYE CREEK GOLD MINING COMPANY.

The following directors' report will be presented to the eighth annual meeting of shareholders, on Thursday:—

The directors have now to present to the proprietors the eighth annual report of the company's proceedings, and it is with pleasure that they are able to call the attention of the proprietors to the evidence it affords of a return to a more prosperous condition.

The accounts duly audited, show that during the past year 3551.26 ozs. of gold have been obtained, realising 13,857. 2s. Including all receipts the net profit for the year on working account is 21137. 7s. 11d.

Since the closing of the accounts on April 30 a profit of \$11,750 has already been advised on account of the present financial year. The total indebtedness of the company in California has been cleared off; and the directors trust that by the end of the current water season the sum of 20000. on debenture account will represent the whole of the company's liabilities. Twenty debentures of 500. each have, in accordance with the Trust Deed, been drawn for repayment on Oct. 31 next.

A report on the various claims by the company's superintendent is presented. This report, though perhaps somewhat disappointing as to the results thus far obtained from the Waloupa and Red Dog claims, nevertheless holds out hopeful anticipations as to their future productiveness.

The "Debris" Suit, in which this company, in common with the other hydraulic mines in the neighbourhood has been involved, will it is expected, come up for hearing before the Supreme Court of California in November or December. It is satisfactory to learn that but little doubt is entertained as to the result being favourable to the mining interests of California. The directors believe that the position of the company will not be in any way prejudiced by the adoption of the "New Constitution" in that State.

The director who retires by rotation is Mr. J. T. P. Pechey, who, being eligible, offers himself for re-election.

The auditors, Messrs. C. O. Rogers and C. Hopkinson, also offer themselves for re-election.

**THE BEREHAVEN MINING COMPANY (Limited).**—The annual meeting of shareholders was held in Dublin on Aug. 12 (Mr. E. Fottrell, J.P., presiding). The secretary and manager (Mr. Robert Clogg) read the notice convening the meeting, and submitted the directors' report. The accounts ending June 30 last were passed unanimously, and they showed that a profit of 6111. 15s. 6d. on the year's workings remained, after having expended 7677. in sinking a new shaft on the Kealogue part of the property. The chairman expressed hopes that the mines would more than pay costs for the coming year, even with the present price of copper, but although not promising, a call would not be made. If it was found necessary the shareholders should be consulted previously. The meeting ended with a cordial vote of thanks to the chairman and directors for their attention to the general business.

**Messrs. Henry Briggs, Son, and Co. (Limited).**—The annual meeting of shareholders was held at Whitwood, near Normanton, on Wednesday. Mr. Henry Currier Briggs, the chairman and managing director, presided, and there was a good attendance of the shareholders. The report of the directors for the year ended June 30, was read by Mr. J. H. Phillips, the secretary. It was stated that notwithstanding the generally disastrous conditions under which the iron and coal trades had been carried on during the last twelve months, a gross profit of 12,385. 19s. 9s. had been realised by the company, and the directors recommended a dividend of 2½ per cent.—The Chairman, in moving the adoption of the report, said that to his mind the report was very satisfactory. During the year they had had a very troublous time, for there had been failures and rumours of failures on all sides in the commercial world, and wars and rumours of wars in the political world, which had rendered the task of conducting the business of a company like that by no means easy. Referring to the items in the accounts, the chairman alluded to the large sum paid by the company for income-tax, and said he was afraid if the present Government continued in office the amount would increase rather than decrease.—Mr. Henry Broadbent, one of the directors, seconded the motion, which was heartily supported by Mr. B. Watson, grocer, Wakefield, who spoke in very complimentary terms of the manner in which the business of the company was conducted and its accounts kept.—After a few questions had been asked, and satisfactorily answered by the chairman, the report was adopted.—Mr. Broadbent, one of the retiring directors, was re-elected, and Mr. John Ingram, of Heath, was appointed a director in the place of Mr. W. Fletcher. The voting for the election of working director resulted in the appointment of Mr. James Pyrah, by 171 votes. Mr. John Masterman, of Wakefield, was re-appointed auditor to the company; and the proceedings were brought to a close with votes of thanks to the various officials of the company.

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#### SAFETY COTTON BLASTING POWDER.

Amongst the new explosives now being introduced in mining the safety cotton blasting powder, manufactured by the Liverpool Cotton Powder and Ammunition Company at their works, Melling, near Liverpool, recently fitted up with new machinery, appears to be making progress. It is claimed that in strength it is equal to dynamite, whilst in action it gives off neither flame, smell, nor offensive smoke. It will be recollected that the powder was publicly tested in the presence of a large number of persons about two years since, when cartridges were heavily hammered, fired into with a bullet from a rifle, and lighted by charges of ordinary black powder without the slightest explosion, the cartridge merely burning away. The company have received many flattering testimonials as to the value of the safety powder in actual use, and one of them—that of Mr. E. B. Thornhill, M.I.C.E., the Liverpool engineer of the London and North-Western Company—may be noticed. He used the powder to deepen the channel leading up to Garston Dock, at a point where the rock is only exposed at extreme low water of spring tides, and he states that holes were drilled to a depth of 2 feet, and charged with two 4-lb. cartridges after the holes had become filled with water. The rock was shattered into such small pieces that there was afterwards no difficulty in raising it with an ordinary dredger. A number of boulders, about 2 feet diameter, and also projecting pieces of rock, were shattered by placing one 4-lb. cartridge on the surface, without drilling a hole to receive it. The results were most satisfactory, and he should have no hesitation in using this powder again, under similar circumstances, in preference to any other blasting material. From experiments he had made he was convinced of its great power and safety, the latter being a most important element with those responsible in the execution of works.

Where employed for blasting purposes in mines the safety cotton powder has given equal satisfaction. Capt. T. Jenkins, of the Barra Barra Mine, writes that the smokeless blasting powder answers admirably. It is quite as strong as any explosive they have ever used, and gives off no smoke or fumes to annoy the men, who can begin to work in close places almost immediately after blasting; he can recommend it most strongly. The opinion of Capt. Thos. Roach, of Polrose Mine, is equally favourable. He writes that the smokeless blasting compound supplied to this mine for nearly 12 months has now been definitely proved by them to far surpass any other blasting material they have ever used. Its economy is especially shown in places where ventilation is spare, as the miners are enabled to immediately return to their work after blasting. One other important advantage they find is that the compound shatters forcibly downwards. This they have experienced practically by holing a winze to a rise,

where the ordinary time and labour were considerably facilitated. Others who have tested the powder give equally satisfactory reports, but these will suffice to show that the compound is worthy of the attention of miners generally.

#### ARTIFICIAL MANURE MANUFACTURE.

Within the last ten or fifteen years considerable attention has been given to the manufacture of superphosphate manures, and Messrs. Lightfoot and Co., of Mülheim, on the Rhine, about 3 miles from Cologne, have been establishing a chemical manufactory and artificial manure works, in which the mineral obtained is conveniently and economically treated. The property has now been sold, subject to a charge of 80000. for 82,0000. in fully paid shares to the Colombia Chemical Factory, Manure, and Phosphate Works, which has been formed with a capital of 200,0000. in shares of 100. each, but the vendors' shares only are at present to be issued. It is now proposed to issue 40,0000. worth of debenture bonds, forming a first mortgage charge on all the assets and property of the company, bearing interest at 6 per cent. per annum, payable half-yearly, and redeemable, 20,0000. in five years, 10,0000. in seven years, and 10,0000. in 10 years, the bondholders having the option of exchanging the bonds for ordinary shares at the date of redemption. It is proposed to apply the proceeds of the bonds, 800000., to the liquidation of the existing charge, which will make the bonds a first charge, and 10,0000. to the purchase of stock and materials on hand, leaving 22,0000. for working capital, which it is considered will be ample for the purposes of the concern.

The property to be transferred to the company includes the houses, plant, and machinery in the works at Mülheim, the steam phosphate grinding and preparation works, brick yards, &c., and also an extent of 1663 English acres of phosphate mining lands, in the neighbourhood of Weilburg and in the valley of the Lahn, three hours from Coblenz, from which the mineral phosphates used in these chemical works are obtained, the whole forming, to use the words of the prospectus, a complete and well organised industry. It is mentioned that the chemical works at Mülheim comprise about seven acres of freehold land, the buildings occupying upwards of four acres. The works are on the main road, and are connected by a private siding with the Berg Markische Railway and with the Rhine, being thus in direct communication by rail and water with local markets and those of neighbouring states, as well as with England, France, and the Netherlands, and the freights are low. These works are fitted with the most suitable machinery and appointments, everything being so devised and arranged as to secure the largest production with the smallest possible expenditure of manual labour. The cost of labour is exceptionally low. There is a dwelling-house for the resident manager, offices, laboratory, labourers' cottages, stables, and a small tramway through all the principal buildings, connected with the railway siding named, and various other adjuncts necessary to works of this character on so large a scale.

The property has been inspected and reported upon by J. Arthur Phillips, whose name is well known to the readers of the *Mining Journal*, and by Mr. Rudolph Schmidt, of Bonn. Mr. Phillips considers that "during periods of ordinary prosperity this establishment ought, with good management, to afford very satisfactory returns for the capital expended." Mr. Schmidt, while remarking that "the value of the chemical works, exclusive of the concessions and contracts, and of what may be termed the goodwill of the manufactory, must now be at least 50,0000.," adds—"I can but repeat what I have already implied, that the Colombia Works are so complete in their details, and so extensive in their capabilities, that the only limit to their operations and to their consequently profitable results is the amount of capital with which you may determine to work them." Calculations of the probable profits, based on these reports and on the operations of the past, have been made, and it is estimated that the returns from the first will be sufficient to pay a dividend of 10 to 15 per cent. on the entire capital, and will go increasing as the business expands. As evidence of the soundness of the business, no bad debt has been made in the past three years. It is observed that Mr. Schmidt, in his report, values the chemical works and land adjoining at 50,0000., and that it is not too much to assume that the 1663 acres of phosphate lands, embracing 28 distinct mining sets, are worth a similar sum; so that the debenture holders, who hold a charge upon all the property, stocks, and assets of the company, have ample security for their money. The reports mentioned, especially that of Mr. J. Arthur Phillips, are instructive and exhaustive, and those who carefully study them before deciding upon the course they will adopt will have no ground for subsequent complaint that every detail was not placed within their reach.

#### REPORT FROM THE FOREST OF DEAN.

Aug. 21.—The half-yearly audit and dinner came off at the Speech House on Tuesday afternoon last, when the following gentlemen were present:—Sir J. Campbell, Mr. F. Brown, deputy-gaveller; Mr. E. Crawshaw, Mr. J. T. Thomas, Mr. T. B. Brain, Mr. A. Thomas, Mr. G. H. Hough, Mr. S. J. Thomas, Mr. A. Ridler, Mr. Phillips, Mr. J. J. Johns, Mr. Deakin, Mr. F. T. W. Brain, Mr. Maule, Mr. Insole, Mr. Leaver (Crown Office), Mr. D. Wintle, Mr. Gould, Mr. T. Smith, &c. Mr. F. Brown represented Mr. Francis, the Crown Receiver. Dinner over there were several short speeches delivered. After the loyal toasts, the deputy-gaveller proposed, "Success to the Iron and Coal Trades in Dean Forest." He regretted the absence of his friend, Mr. Francis, but observed that the toast which was received so warmly had not been a cheerful one for several years past, but there were now some slight indications of coming improvement to be observed in America, which, arguing from the past, he hoped and expected would soon be felt in this country, and when the revival did come he hoped the masters and men would take care not to kill the goose which laid for them the golden eggs.—Mr. E. Crawshaw thanked the deputy-gaveller for associating his name with the iron and coal trades of Dean Forest. During the last few years he had observed nothing but retrogression, but when the revival did come it would be unwise to take advantage of it too soon, either by the masters or men; they should both learn the lesson which the past ought to teach—the great importance of both working together for the interest of each other. He shared the views of other employers in thinking that for some time past the working men and their families in very numerous instances had suffered most severely. When improvement did reach them he was sure all of them would benefit. With regard to the iron trade, he considered that what was taking place in the North of England, where they were successfully employing the poorer kind of ore for the manufacture of steel, was calculated to affect districts like the Forest, where they had to be, he was sorry to say, at great expense in getting the deep ores. But to meet the new circumstances, they must do their best to reduce all unnecessary outlays, which, perhaps, in times of prosperity they did not sufficiently consider. Mr. J. T. Thomas referred to the drinking indulged in by the young men in times of good trade. Sir J. Campbell in the course of a conciliatory speech, expressed his belief that if Crown officials and gales were to meet each other with frankness and mutual forbearance they would more speedily arrive at a satisfactory understanding, and referring specially to the price of pit timber, suggested a kind of sliding scale according as the trade in coal might be good or bad, and its price high or low in the market. Mr. Brown said that the Crown officials had their duties to perform, which sometimes did appear to be antagonistic to the gales, but he did hope that they as Crown representatives had really shown their sympathy with the coal and iron proprietors during the recent years of depression. Mr. E. Crawshaw proposed the "Railway Interest," and referred to the amalgamation of Severn and Wye Company with the 8-vern Bridge Company, adding that as the bridge was nearly completed, it would most likely be opened in a few weeks time, and would, he hoped, answer their expectations. The Messrs. G. B. and G. W. Keeling replied to the compliment. Several matters of interest are suggested by the speeches and remarks made at the gale dinner, but we cannot stay to discuss them at present; but one thing we must say a word upon—that it is a gratifying fact to observe that a more frank and cordial understanding is gradually growing up between the Crown officials and the local proprietors of mineral property.

Sometimes persons upon mere hearsay at a distance send what purport to be authentic and reliable accounts to the public Press, which in some instances result in serious mischief. A case has just recently cropped up. A paragraph appeared in a local paper stating that the owners of the Duck pit had suspended operations and discharged the employees, whereas the cutting of certain measures had been suspended to transfer the workmen to other veins; but as the paragraph stated that work had stopped and the men discharged, the owners suffered serious loss, as customers observed the paragraph and went elsewhere for their supplies. Many paragraphs appear in print respecting this district equally unworthy of credit. The writers, miles away, hear something, and instantly send a paragraph off to the Press; but at a distance it proves acceptable gospel, and is received in preference to what is trustworthy. Having been appealed to from the firm above alluded to as to whether we could throw any light upon the origin or source of the mischievous paragraph, we informed those enquiring what was the fact—that we knew nothing of it until we saw it in print. We expect little improvement in the coal trade for some weeks to come, but the chill of autumn and the opening of the Severn Bridge may be counted on, we think, to lead to some improvement. The local forge is very fairly employed, but profits and



wages are low. The tin plate trade is acting upon the self-defence maxim of reducing production by playing one day a week—in some cases it is said two days short time is adopted. The production of pig-iron and the raising of iron ore are both very limited; and, notwithstanding that there are slight indications of improvement in the iron trade elsewhere, in Deau Forest the business looks more like being in a state of commercial coma—a symptomatic condition frequently premonitory of death—or of the crisis which precedes improvement and convalescence. We hope it is only symptomatic of a coming change for the better. On Saturday last the Messrs. Crawshaw put up notices that all contracts would cease with the present month, and that the furnaces are to be blown-out. Notwithstanding such a sweeping announcement, it is only understood by some to point to a further readjustment of wages, and possibly to one furnace being blown out. Things generally in the Forest are at a low ebb—in West Dean especially—about one-fifth of the rateable property being sold.

In East Dean matters are not quite at such a pass, but are bad enough, the pinch of poverty being felt there, but not equally as in West Dean. Public burdens are increasing, the rate just issued being 15 per cent. upon the rateable value of the property in the township. If people had more public spirit, the public burdens might be lightened to some extent, as a more careful economy could then be brought about, but people will not move in such matters until they feel the smart, when it is frequently too late to remedy the evil. So Englishmen still "grumble and pay," instead of being wise in time. We trust, however, that as education spreads, and the people avail themselves of the cheap newspaper literature of the day, intelligence will permeate the masses, and an improved state of things be the outcome of the process. Let us hope that a time will arrive when some popular ballad maker will be able to give us some inspiring verses of a "good time," without that sly innuendo, "wait a little longer," being added.

#### FOREIGN MINING AND METALLURGY.

An adjudication is to take place at Gand, on Monday, for the supply of 772 tons of coal required for the communal schools and other public establishments. Although this is but a small affair, it is likely to be keenly competed for in the present period of depression. The Meuse Company is constructing an intermittent rotary drainage engine on the Kley system, which is intended for a colliery in the Spanish province of Jaen. The engine will be of 200-horse power. There would not be much in the affair but for the fact that hitherto the Spaniards have obtained their mining machinery exclusively from England. Belgian mechanical firms have now obtained a footing in Spain, and they are improving their opportunities. Special tariffs have been introduced on the Belgian State Railways for the conveyance of coal, coke, and briquettes in deliveries of 100 tons at least, and intended to be exported over sea.

The tone and aspect of the Belgian iron trade have experienced little change. It is feared some firms are working at a loss, and two or three establishments are said to be on the point of blowing out furnaces. Some fortunate concerns which produce specialties and have a settled connection are still disposing of their products upon remunerative terms, but these establishments are, after all, doing only a comparatively limited business. The great rolling mills have been compelled by the force of competition to reduce their prices to the extreme limits of cheapness, and until quotations revive they will not realise any profits, but will merely vegetate. Industrialists who work up raw iron state that it is offered to them for nothing; this is, of course, a figure of speech, but still there is, unfortunately, a certain amount of truth and accuracy in it. Contracts for 121 carriages of various types are about to be let for the Belgian State railways. A contract has also been let for a locomotive shed at Tirlemont. M. Ghilain, of Liège, submitted the lowest tender (4760*l.*). The cost of this shed was estimated at 5904*l.* New boilers are being fitted into the Comtesse de Flandre, a mail steamer running between Ostend and Dover. The old boilers, which weigh about 41 tons, are to be taken in part payment.

The Paris coal market has presented much the same aspect as for some time past. The daily sale is limited to the most pressing requirements of consumption. MM. Breton and Co. have contracted to supply the prisons of Paris with coal for a year at 31*s.* 2*d.* per ton. The Anzin Company has contracted to supply coal for the postal service at 29*s.* 6*d.* per ton. M. Boudonneau, of the Quai Jemmapes, has undertaken to supply Belgian coal for the Ecole Polytechnique upon the following terms:—Charleroi coal, 32*s.* per ton; and Mons coal, 35*s.* 4*d.* per ton. Apprehensions of a bad beetroot crop this year in France have subsided; the proprietors of sugar works are, however, still giving out orders very sparingly. The industrial consumption of coal has not increased generally in France.

The laying of a second set of rails on the Warsaw line of the Great Russian Railway was completed in 1878. The cost of this work was estimated at 4,540,067 roubles. The real cost has not yet been definitely settled, but it will be something less than the estimate. An expenditure of 12,407,873 roubles has been made for the purpose of putting the Nicholas (Moscow and St. Petersburg) line of the same system in a good condition. The administration has reconstructed a large number of bridges, and some important works are in course of execution for the purpose of modifying the route of the line if the Werobia ravine. The object of the new route is to obviate an incline, which often involves the employment of two engines for each train. A second line of rails has been laid on the Moscow and Korow section of the Nijni-Novgorod line. Traffic was commenced over this duplication in September, 1878. The works involved an outlay of 3,161,700 roubles.

#### FOREIGN MINES.

**RICHMOND CONSOLIDATED.**—Telegram from the mine at Eureka, Nevada: Week's run, 335,000, from 740 tons of ore. Dred bars from refinery, 333,000. Tied No. 2 furnace with coke alone; production reduced one half. Now using mixed fuel.

**R. Rickard, Eureka Nevada, July 30:** Since my last there is no change of importance to mention from any of the different workings in the mine. The 200 cross cut has been drifted 12 ft. in very favourable ground for ore. The 400 west quartzite drift has been advanced 17 ft. without any change in the ground. The 400 south-west cross cut has been drifted 17 ft. in hard limestone. The 500 north cross cut has been drifted 12 ft. without any change. The 600 west drift has been advanced 11 ft. in very hard limestone. The 600, west and south of the South Fissure drift, has been advanced 22 ft. in low-grade iron ore, the present drift is looking very favourable for good ore. The chambers are without much alteration since my last; they are turning out the usual quantity of fair grade ore. The machinery both in mine and smelting works is in good working order.

**ALMADA AND TIRITO CONSOLIDATED.**—Telegram from Mr. Clemes, July 28: Profit for the second quarter of 1879, 98,400. I have remitted you bullion, 33,500.

**EBERHARDT AND AURORA.**—Extracts from Capt. Drake's letter, dated July 28: Progress report for week ending July 26—Eberhardt upraise: Distance run to July 19, 40 ft.; run for ore ending July 26, 10 ft.; for month of July, 50 ft.; total distance to July 26, 50 feet.—Clausen South from Raine: Total distance to July 26, 12 ft.—Remarks: There has been no material change in the character of the ground since my last report.

**PIANGUI (Gold).**—Mr. T. S. Treloar (Pitangui, July 17) reports—The works in connection with the communication from the adit to the surface I am pleased to say have been completed, the rise having held to the shaft on the 12th inst.; we are now, therefore, in a position to cut into the lode without fear of being overpowered by water. Two levels for this purpose have been commenced—one 13 fathoms and the other 20 fathoms from surface. The first named is a continuation of the one from No. 2 shaft to the rise, and will be of service for letting down the water to this depth, but we are doubtful whether it will go down the old workings on the Ouro Pedro vein, consequently a deeper level is being driven from the rise, to be followed eventually by another or more, as may be considered advisable, thus draining the ground gradually to the horizon of the adit. The line found at surface continues undisturbed, owing to the crushed condition of the jacutinga, and we have little or no stuff from it at present suitable for treatment.

**SANTA BARBARA (Gold).**—T. S. Treloar, Pari, July 15: During June 914 tons of mineral were stamped, producing 3298 ozs. of gold, equivalent to 3395 ozs. per ton of stone stamped. This produces of 3298 ozs., valued at 8*s.* 6*d.* per oz., amounts to 1392*l.* 11*s.*; and the estimated working cost for the month at exchange 19*d.*, being 855*l.* 19*s.* 10*d.*, leaves an estimated profit of 540*l.* 10*s.* 24*d.* for June. Mr. Treloar, acting in the absence of Mr. Hilke (who had left the mines on July 6 for the purpose of proceeding to England for the benefit of his health) advises that there was no change in the mine calling for remark. The yield of the mineral showed an improvement of 388 ozs. per ton as compared with that derived during the month of May. The amended law relating to the gold tax came into force on July 1. The mine captain reports that the quantity of ore raised during the month amounted to 1147 tons, of which 233 tons were rejected as refuse stone, and 914 tons treated at the stamps. Average quantity of ore raised per ton for the month 30 tons, or per hole bored 0.628 ton.

**ISABELLE (Gold and Silver).**—July 26: Foreman's Report: Total distance from monument to face of tunnel, 603 feet. Distance run for the week, 37 feet. Number of shots, 10. Rock about the same as last report.

**FLACERVILLE.**—J. Thomas, July 28: During the past two weeks the 4th level has been driven north 9 ft., making a total length of 215 feet. The winze from fourth level has been sunk 6 ft., making a total depth of 11 feet. The fifth level has been driven north 10 ft., making a total length of 30 feet. Extracting ore.

**T. Price, July 30:** Mr. Thomas reports that the quartz in the winze towards the 500 ft. level is very good, and also that the quartz at the north end of the 400 ft. level has improved considerably.

**Telegram.—T. Price, Aug. 16:** Have crushed another 275 tons of quartz, yielding 3300*l.*

**EXETER.**—August 16: The manager's report is as follows—Everything goes on uninterrupted throughout the whole of our works. At the mine our No. 4 level end is again much improved, and a great deal easier for driving, and the stopes continue to yield silver lead and blende ore of the usual quality. All necessary arrangements have been made for increasing the number of miners,

and we are now in a position to break a very much larger quantity of ore than we have ever yet done; in fact, we can increase the quantity according to the number of men employed. We have enlarged our tipping place, and we are now ready to charge a larger number of carts than at present employed. Seeing the necessity of largely increasing our returns of ore we are pushing forward as fast as possible the completion of our large set of new jiggling machines, and our mechanics are working night and day. We calculate to get the same to work in about a fortnight from this date, when we believe our returns will be of a very satisfactory nature. The No. 3 crusher, which we referred to in our last report, was left here by the former proprietor, and with a little alteration and repairs it will be made available for the reduction of our mixed fine ore, of which we have now a large quantity in stock, and which gives by assay a very good result of silver-lead ore. This crusher will be erected inside the dressing house and by our No. 1 crusher water-wheel at a trifling expense, as there is no house to build. The beams are delivered, and nearly ready to go into position. In consequence of the national fête of France falling on Friday and Saturday we have not had brought down from the mine the quantity of mineral we anticipated, as a large number of the wagons have not gone up to the mine for those days. Our dressing is going on satisfactorily, and we are gradually increasing our quantity of returns. Ore raised during the past week, 20 tons.

**Capt. Edwards also reports as follows, under date Aug. 15:**—We are now engaged in fixing the new jiggling machinery at the higher dressing floors close to the crusher, which will be worked by the same water-wheel that works the stone-breaker. I will send in a few days a sketch of the new works now in hand. The ore from the stone-breaker will be put direct into the crusher, which is only about 12 ft. from the crusher rolls, and at the same floor, and from the crusher the ore will be washed direct into the separator, and from there it will be lifted into the jiggers by the elevator, and worked from the same water-wheel. With regard to the revolving picking table we must have time for all these appliances; it has not yet been fixed, as we are now handpicking all the best lead and blende which is not put to the stone-breaker. This machine will crush ore enough to keep going both the crushers without any spallers. The elevator will pass all the ore to the jiggers except the very fine, which is passed over the buddles. With reference to the ore on the floors which you refer to we have about 75 tons which have passed through the jiggers, but it is mixed with blende, and must be crushed again in order to separate the lead from the blende. This ore will average about 25 per cent. of lead. In addition to the 25 tons I have mentioned we have on the floors an immense quantity of ore already crushed, but our present jiggling power will not allow us to treat it. When our new jiggers are finished, and the little crusher left here by Mr. Kaulek is fixed, all this ore will be crushed and separated as the work progresses. Up to this time we have taken out only what we (in mining terms) call crop or solid grain ore. A great quantity of lead and blende when pulverised by this little crusher will be treated and prepared for market, which will be equal to our present average. In about three weeks from now, if we are not delayed by the ironfounders, we shall put to work our great set of jiggers at No. 1 dressing floors, when we shall be able to treat a much larger quantity of ore, with a proportionate result. I wish again to say that our work is difficult to separate, but we are improving the separation every day, and nothing as far as I can judge is wanting but a little time to realise very satisfactory results. The mine is looking just as usual, any quantity of mineral of good average, and I trust your board will give us a little time to carry out our work here at the dressing floors.

#### THE WEEK.

**SATURDAY, AUG. 16.**—Several large "bear" accounts in railways were closed, leading to a material rise in price. From 112 York, A, advanced to 114. North British touched 73, Brighton, A, 109½, and Berwick 132½. Sheffield rose in sympathy with York, A, and closed at 74. Great Eastern was only moderately active, the improvement being confined to ¼. Mining shares met with a strong demand, but very few could be obtained at fair prices. Of late the market has been in a very unsatisfactory condition, all "buyers" or "all sellers."

**MONDAY.**—The return of wet weather checked somewhat the upward tendency of railways. North British receded ¼. Brighton, A, at one time showed a fall of 1 per cent.; but a rally set in, and this led to a quiet day. Mining shares were again in good demand. South Caradon was quoted 8*s.* higher, and West Seton 2½*d.* Wheel Crebors were firm at 3*s.* Great Laxey and Van rose a further 10*s.* It is not likely that holders whose patience has been so sorely tried are going to sell directly matters look brighter. If the demand for mining shares continues much higher prices must consequently prevail.

**TUESDAY.**—A further general advance took place in mining shares, a good business being done in the following at increased prices:—Tincroft, Wheel Grenville, Wheel Crebors, Wheel Peavor, Linars, Van, Great Laxey, Roman Gravel, Sierra Buttes, and Tharals. One or two iron shares also met with enquiry. Ebbw Vale were dealt in at 4½*s.* Rhymney at 18½*s.* and the new shares at 4½*s.* Cardiff were offered at 15*s.*, and Bilsdon at 30*s.* Railways were depressed, though no great fall was recorded. Great Eastern receded to 54½*s.* and York, A, to 114½*s.* East Argentin touched 9*s.*—a dividend of 5*s.* per share is announced.

**WEDNESDAY.**—The Great Western dividend was announced as one of 3½*s.* with 16,000*l.* carried forward. This came on the market rather as a surprise, not more than 3½*s.* being looked for, and the stock advanced straight away from 94 to 96. The wet weather checked any rising tendency elsewhere, but most stocks were very strong, and only requiring a few days to effect a great alteration. North-Eastern traffic showed a decrease of over 14,000*l.*, but after falling 1 per cent. the stock left unchanged.

**THURSDAY.**—Railways again showed a firm front notwithstanding the wretched weather. Brighton, A, touched 109 and North-Eastern 133. Mexican, 10½ to 10½; Mexican Railway, 1½ to 1½; ditto First Preference, 7¼ to 7¼; ditto Third Preference, 3 to 3½. Erie securities were very dull, the Second Mortgage fell below 7*s.* Van shares were dealt in at 15½*s.*, the circular announcing a reduction in the output having frightened a few of the recent buyers. To-morrow the Stock Exchange will be closed at 3 o'clock, and altogether on Saturday. Illinois central, 99½ to 100½. Reading General, 75½ to 76.

**FRIDAY (Opening).**—Railways are much the same as last night, though the weather is greatly improved. Brightons are offered at 108½*s.* and Berwick C 133. Eries are better, the price being telegraphed from New York ¾ higher. The shares are 27½*s.* and the second mortgage 76½*s.* Great Western, 95½, 84½; District, 70 to 70 ½; North British, 71½ to 72; Egyptian Preference and United are each ¼ better; Ottoman Bank, 9½ to 9½. Mining shares continue in good demand. Tankerville, 3 to 3½; Linars, 3½ to 4½; Alamillos, 1 to 1½; Don Pedro, 3½ to 4½; Richmond, 7¼ to 7½; Wheel Crebors, 2½ to 3; Nouveau Monde, 3½ to 4½; Van shares remain dull at 15 to 15½. —Zinc: Brightons have been very active, to 108½ to 108½, but are now firm again at 103½ to 109. Caledonia, 91½ to 91½; York, A, 114 to 114½; Wheel Crebors advanced to 2½, 3½. Business done in Van at 15½. Eries shares, 27½ to 27½; Second Mortgage, 76½ to 76½. Cuba Submarine, 6½ to 7. Direct United States, 10½ to 10½. Direct Spanish, 1½ to 2½. Eastern, 7½ to 8. Globe, 4½ to 5. Great Northern, 8½ to 8½. Reuter, 9½ to 10. —Three o'clock.—All the markets closed fairly firm. The business done, however, was extremely moderate, several stocks not having been once dealt in. Brighton, A, 108½ to 109. Berwick, 133 to 133½. Caledonia, 91½ to 91½. North British, 71½ to 72. Great Eastern, 55. Illinois Central advanced to 99½, and Atlantic, First Mortgage to 34½. No improvement was shown in Erie, Cardiff and Swansea Colliery, 10*s.* to 15*s.* Chapel House, 1½ to 8½. Bilsdon and Crump, 1 to 1½. Newport Abercrom, 4½. Alltair, 3½. **FREDERICK R. KIRK.**

**GENERAL MARKETS.**—Markets close firm, but show very little change for the week. There has been some improvement in English railways, especially in Great Western, on the dividend, which was particularly satisfactory, 8½ per cent., the same as last year, but carrying forward a large balance. Most of the stocks of a speculative nature are better, chiefly owing to the closing of "bear" accounts. Foreign stocks are rather dull, Argentine being exceptionally good. Grand Trunk and Great Western of Canada are better on the restoration of the Chairman of the latter company. The English funds are firm. Mines have been very active, the chief business having been in Wheel Crebors, Carn Brea, Cook's Kitchen, South Frances, and Wheel Peavor.—W. H. H. WATSON: 1, St. Michael's alley, Cornhill, E.C.—Friday Morning, August 22.

#### THE TEMPLE MINE—SPECIAL REPORT.

**Aug. 16.**—The No. 1 level has now passed through the first course of ore discovered in No. 2 and passed through by that level as well as No. 3, and as there is a very good branch or cross lode going off to the north, a few fathoms behind the end, the men have been put to follow it, and, at the same time, to stop away the ground near the winze, where it is proposed to sink a shaft in the ore ground below No. 1 level. The No. 2 level is being driven on with all possible speed in a lode of the most promising character, composed of spar, lime, blende, and good strings of lead ore; when last taken down it produced fully 10 cwt. of lead per fathom, and from appearance an improved produce is confidently expected during the next few fathoms driving. This end is now entering into that part of the company's grant where good ore deposits are expected to be met with; in fact, that particular point which was aimed at when the company commenced their operations has been nearly reached, where it is intended to throw out the cross cut to intersect the side lode, which at surface present every indication of being rich in depth, and it is considered that at the depth of No. 2 fathom level, present end, 35 fathoms from surface, these side lodes will be found productive. The proposed plan after extending the No. 2 level about 10 fms. further into the mountain, is to drive the cross cut in a north-westerly direction, or at right angles with the lode, for a length of about 50 fms. to the northern boundary of the sett, within which side lodes are so numerous, and which may be expected to be intersected, some of which will no doubt be productive, as they have been found to be and are extensively worked upon in the mines both to the east and west. The No. 3 level is suspended temporarily pending the result of the next 10 fms. driving in No. 2, and the men have been transferred to No. 1 level to assist in stoping and cutting away the ground above the point where it is intended to sink in the ore ground below No. 1. On surface we have employed, in addition to one smith and two carpenters, engaged on some additional dressing apparatus, and preparing for the erection of stone-breaker, two men laying tramway to proposed incline, two men quarrying stone for wheel pit, two men cutting ground for foundation, and two masons laying foundation for the 40-ft. wheel pit, two men and one girl attending crusher and jigger, &c., and the engineers preparing the necessary gear for driving stone-breaker with the 30-ft. wheel. The hands employed underground, in addition to six men driving the No. 2 level west, and one tramming the ore to the dressing floors, are 24 men engaged in stoping Nos. 1, 2, and 3 levels. It is estimated that the average produce of the stopes in the various levels is equal to fully 1 ton of lead ore per fathom. The mine is well ventilated, and fully supplied with tramways throughout each level. The working which is on the mine, as far as is completed in excellent order, and machinery well. The 30-foot and 14-foot water wheels are sufficiently powerful for crushing and dressing large quantities of lead ore, and the crusher and jiggling apparatus are equally efficient. The erection of the stone-breaker, 40 feet water-wheel, and drawing and pumping machinery will be proceeded with as rapidly as circumstances will admit. A good stock of lead ore will be broken with as little delay as possible, when dressing operations will be commenced in earnest; a sample of the small quantity of lead already dressed has been sent to be assayed, and it is hoped that an advance in the market value will take place before the company determine to make any sales. The exploring levels have not been so favourable during the past few months as previously,

but an improvement in No. 2 may be expected, and should it occur the value of the property will be materially increased, or should the course of ore already laid open be found to improve, or even to continue its present produce in the sinking below the deep adit—No. 1—level, the mine will become more valuable. Materials are being supplied at moderate prices. Labour is particularly cheap, and on the whole the prospects of the company are good.

Extract from weekly report received at the company's office, 3, Great St. Helen's, London, on Thursday:—

Temple Mine, Aug. 20: We have cut down a little more of the lode in the end of No. 2 level, and are happy to say it continues to improve gradually; the produce of lead may now be estimated at fully 13 cwt. per fathom; the lode is wider and stronger.

The following is a copy of certificate of assay of the sample of lead ore alluded to in the report:—

Laboratory and Assay Office, 3, West street, Finsbury, August 21, 1879.

Certificate of assay of sample of galena, marked "Temple No. 1," forwarded by Mr. Charles Thomas, F.G.S.:—

Lead ..... 82.5 per cent.  
Silver ..... 16 ozs. 6 dwts. 16 grs. per ton.  
W. WHITE, M.P.S., Assayer.

**COAL AND IRON IN THE UNITED STATES.**—The New York coal market has been dull. Consumers have generally fair stocks and dealers are full. The aggregate production of anthracite and bituminous coal in Pennsylvania to July 26 this year amounted to 15,782,974 tons, against 9,913,245 tons in the corresponding period of 1878, showing an increase of 5,869,729 tons this year. The New York pig-iron market has retained its firmness, and prime brands are stated to be in short supply. The market for Scotch pig has been fairly active at New York. The demand for both steel and iron rails has continued—except for very distant delivery—greatly in excess of the visible supply. No transactions of any magnitude have been reported in steel rails at New York; quotations have remained at \$45½ to \$46 per ton at Tidewater. The sale is noted at New York of between 1500 and 2000 tons of English rails. The Philadelphia market for pig-iron still shows strength. Business in structural iron has been active at Philadelphia, the demand having been greater than the supply. Few of the Pennsylvania steel rail mills are now in a position to take any further orders. The demand for iron rails has also shown no abatement at Philadelphia.

Messrs. John Wallace and Company, iron and steel merchants, Dundee, have been the successful contractors to supply 15,000 tons of steel rails and fastenings for the Canadian Pacific Railway. The Canadian Government asked tenders for 15,000 tons, but the Minister of Railways and Canals considered the prices quoted by the several firms so very moderate that he has bought in all 60,000 tons. Steel rails were never sold at the price offered before, and it is considered unlikely they will ever be so again. The demand for pig-iron and old iron rails for America is developing, and freights from Glasgow to New York, which for long have been 2*s.* 6*d.* per ton, were 12*s.* 6*d.* last week.

The directors of the Gloucester Wagon Company in their annual report, state that a larger dividend than 4 per cent. per annum could be paid, but looking to the continued depression of trade and to the large number of unemployed wagons, and that the rents had a downward tendency, they considered it prudent to recommend a dividend of only 4 per cent., to add 50*s.* to the guarantee fund, and to carry forward the balance of 2000*l.* to next account.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 14—North Hendre	100	.....	£ 9 3 6	Walker, Parker, and Co.
— ditto	100	.....	9 3 6	Adam Eytton.
18—Foxdale	100	.....	13 0 0	Panther Lead Company.
21—Van	100	.....	10 0 0	Walker, Parker, and Co.
— ditto	50	.....	10 2 6	ditto
— ditto	50	.....	10 2 6	Adam Eytton.
— ditto	50	.....	10 8 6	Runcorn Smelting Co.

BLENDE.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 21—Van	150	.....	£ 2 18 0	Dillwyn and Co.

COPPER ORES.				
Sampled July 20, and sold at Swansea, Aug. 12.				
Mines.	Tons.	Produce.	Price.	
Betta Cove. 100	125½	.....	£ 5 6	
Union. 100	125½	.....	5 6	
ditto. 100	125½	.....	5 6	
ditto. 100	125½	.....	5 6	
ditto. 100	125½	.....	5 6	
ditto. 81	9½	.....	4 11 6	
ditto. 115	7½	.....	4 0 6	
ditto. 115	7½	.....	3 18 6	
ditto. 85	9½	.....	4 12 6	
ditto. 85	9½	.....	4 13 0	
ditto. 84	9½	.....	4 9 6	
Union. 76	12	.....	5 18 6	
ditto. 76	12	.....	5 18 6	
TOTAL PRODUCE.				
Betta Cove. 1050	.....	£536 13 6	La Borbolla. 40	.....
Union. 302	.....	1794 17 6	Copper Ore. 9	.....
Bogalho. 155	.....	2163 8 6	La Borbolla. 6	.....
Berehaven. 107	.....	508 5 0	Mostardeiro. 11	.....
Sobral. 62	.....	531 13 0	Copper Precip. 3	.....
Total				£10,713 15 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.				
Names.	Tons.	Amount.		
Copper Miners' Company	198½	.....	£1,066 13 6	
P. Grenfell and Sons	238	.....	897 9 0	
Nevill, Druce, and Co.	3	.....	91 17 6	
Williams, Foster, and Co.	397½	.....	3,739 2 3	
Mason and Elkington	85	.....	394 3 9	
Charles Lambert and Co.	395½	.....	2,117 18 3	
Sweetland and Co.	144½	.....	780 8 9	
Landore Copper Company	285	.....	1,678 2 0	
Total	1745	.....	£10,713 15 0	

NO SALE ON AUG. 26.				
TOTALS AND AVERAGES.				
31 cwt.	Produce.	Price.	Per unit.	Standard.
Whole sale	1745	.....	£ 3 9	10 <i>s.</i> 3 <i>d.</i>
		.....	.....	474 9 7

COPPER ORES.					
Sampled Aug. 6, and sold at the Royal Hotel, Truro, Aug. 21.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols.	97	£1 11 6	South Caradon	45	£3 5 4
ditto	95	1 9 0	ditto	43	3 4 0
ditto	84	1 6 0	Marke Valley	75	4 0 0
ditto	80	1 6 6	ditto	65	2 0 0
ditto	78	1 4 6	ditto	58	2 14
ditto	75	1 4 6	ditto	51	1 13
ditto	73	1 1 0	ditto	30	2 11
ditto	70	1 7 6	Glasgow Caradon	66	3 4
ditto	50	4 8 0	ditto	58	4 1
ditto	45	4 18 0	ditto	56	3 18
ditto	33	3 5 0	Wheal Crebor	82	3 3
ditto	25	4 10 6	ditto	81	3 4
South Caradon	89	2 13 6	Hington Down	60	1 17
ditto	82	2 17 6	Bedford United	55	3 14
ditto	78	3 11 0	Gawton	43	1 2
ditto	51	8 10 6	ditto	11	3 8
ditto	10	8 10 6	Phoenix	50	4 3



# Llanbadarnfawr Lead Mine Company

(LIMITED).

CAPITAL £20,000, IN 5,000 SHARES OF £4 EACH,

3875 of which will be denominated A Shares, and will be liable to calls, and 1125 of which will be denominated B Shares, and be issued as fully paid-up to vendor of the property.  
£1 payable on application and £1 upon allotment. In case of no allotment all moneys will be returned in full. No calls to be made within six months after allotment.

The company, being registered with Table A, will be managed by Directors to be chosen at the First Meeting of Shareholders.

BANKERS—LONDON TRADING BANK (Limited), 1, West-street, Moorgate-street, E.C.

SOLICITOR—J. E. SMITH, Esq., 9, Pancras-lane, London, E.C.

AUDITOR (AND ACTING SECRETARY, PRO TEM.)—MR. E. L. ERNEST.

OFFICES—4, QUEEN STREET PLACE, CANNON STREET, LONDON, E.C.

## PROSPECTUS.

This company is formed for the purpose of purchasing from the present holders the Llanbadarnfawr mining sett, and by proper application of capital developing the evidently great resources of the property, which it is confidently believed by the best scientific authorities must yield great returns to the investors.

The property is situated in Cardiganshire, on the estate of Sir Pryse Pryse, some eight miles from the shipping port of Aberystwith, and in the heart of the richest cluster of lead mines in the United Kingdom.

It has an area of one mile in length upon the run of the lodes, with about half-a-mile of breadth, and the turnpike road to the port forms one of the boundaries of the sett—a very great advantage in itself, the cost of carriage being much reduced thereby.

There is every reason to believe that this mine will prove one of the great prizes of this noted county. The fact of its position—viz., in the immediate neighbourhood of the best and richest mines of the past and present—would alone be sufficient to warrant its energetic working, but in addition the incoming shareholders will reap the advantage of the property having to a great extent been proved for them, and proved sufficiently to amply justify the purchase, and the application of the necessary capital to continue the work already commenced. During the development there will be good returns, and every day's work will show the mine growing richer in productiveness, and on the road to rival the best of its valuable neighbours.

An engine shaft has been sunk 30 fms. from the surface, and levels driven at 20 fms. and 30 fms. east and west. The 30 fm. level has been driven into a splendid lode, and it is only necessary to examine the ore hauled from this level and now lying at surface to be convinced that a great and profitable mine is in store here. In the adit level a valuable discovery has been made of fine ore, spotted with copper just at the point of junction of two lodes, and the lode in the level west of the south cross-cut has been proved of excellent value, even at this early stage.

The mine has the great advantage of ample water power for raising, crushing, and dressing the ore, and thus a saving of a large outlay, &c., for steam-engines, is effected; water-courses have been already made, bringing the water into the sett. Water power is one of the

rare features in mining, and one that cannot be too highly appreciated.

There are the following necessary adjuncts for working on the mine, which, with a moderate outlay, can be made sound and good—viz., a 30 ft. diameter water-wheel sunk in a 40 ft. pit, built in a thoroughly substantial manner, with bobs, travellers, and rods from wheel to shaft, pulleys, stands, &c., 60 fathom pumps, drawing machine fixed, &c.; there are also smiths' and carpenters' shops, store house, offices, &c.

From the position—some half mile south of the celebrated Goginan, and as before stated surrounded by all the richest mines of the district—and character generally of this property, it is not too much to claim for it that it is undoubtedly the best and most promising mine that has been offered to the public for many years. The proposed capital and purchase money bear but trifling comparisons to what it is evident the property is capable of becoming under good management and with sufficient working capital, and it therefore offers an excellent opportunity for investing money with confidence.

The mine as it stands with plant, &c., takes note for two years, with liberty at any time to take up lease for twenty-one years, subject to minimum rent of £25, merging into dues of one-sixteenth, the company has agreed to purchase for £3500 in money, and £4500 in paid-up shares. This moderate and reasonable price will leave ample capital for the development of the mine, and the directors will see that the money of the shareholders is applied justly and judiciously to the working of their property.

It is confidently anticipated that no further call will be required, but that on the contrary the amount proposed to be called up will be more than sufficient to develop the property, and bring the shares to a large premium.

Prospectuses, plans, Memorandum of Association, &c., can be had, and contracts seen, at the offices of the company.

The only contracts entered into are one made between James George Green, and Arthur James Chichester, of the one part, and William Henry Chichester, on behalf of the company, of the other part, and dated the 28th July, 1879; and another made between Arthur James Chichester, of the one part, and the company of the other part, and dated the 1st August, 1879.

## Registration of New Companies.

The following joint-stock companies have been duly registered:—

**JARA CREEK GOLD WORKS (Limited).**—Capital 20,000*l.*, in shares of 1*l.*, with power to increase. To purchase the right to work a certain gold property situate at Surinam, South America, granted to T. N. Eckhardt de Mesquita under contract from the local Government. To purchase or otherwise acquire any mines, land, mineral properties or rights or other interests in Surinam, also mills, buildings, plant, machinery, stores, tools, and other effects which may be deemed necessary. To work, explore, develop, and maintain the mines, properties, and works of the company. To deal in, sell, and dispose of metals, ores, and minerals generally, and to carry into effect an agreement made between H. L. Phillips of the one part and J. R. Manes as trustee for the company, of the other, to purchase the interests of T. N. Eckhardt de Mesquita and others in fully paid up shares. The subscribers are—T. Kent, 51, Lee Park, gentleman; 5; A. Kerly, 14, Great Winchester-street, solicitor; 5; H. L. Phillips, 184, Palmerston Buildings, gentleman; 5; F. B. Powell, 223, Hampstead-road, law clerk; 1; T. R. Strangman, 127, Leadenhall-street, manager to a public company; 5; E. Lane, 6, Palmerston-road, out of business; 5; Charles Smith, Stoke Newington, clerk; 1. The first directors shall be Messrs. G. Palmer, T. Kent, and J. Romanes, the number not to exceed seven or less than two. Qualification 10 shares until 500*l.* is allotted, thereafter the holding of not less than 100 shares.

**THE HANLEY AND BUCKNALL COAL COMPANY (Limited).**—Capital 25,000*l.*, in 5*l.* shares. To carry into effect a certain contract already made (not registered) with the New Hanley and Bucknall Colliery Company (Limited) for the purchasing or otherwise acquiring of coal mines, collieries, railway plant, machinery, implement, wagons, houses, appliances, and effects, belonging to that company, situated in Staffordshire, and to search for and bring to the surface all coal, cannel, ironstone, and other minerals, and to make merchantable, sell, and dispose, and make profits thereof. To acquire any other mines, beds, seams, or quarries of coal, ironstone, fire-clay, &c., and to carry on the business of coal and iron masters, founders, brick and tile makers, &c., in all branches of such businesses. The subscribers (who take one share each) are—J. Dugdale, Burnley, merchant; J. F. Buckley, Greenfield, near Manchester, coal proprietor; A. Buckley, Greenfield, near Manchester, coal proprietor; J. Wood, Glossop, manufacturer; A. Winstanley, Manchester, mining engineer; Josiah Radcliffe, Bryn Dinarth, merchant; W. Sidebottom, Broadbottom, cotton manufacturer; Jo-hua Radcliffe, Rochdale, cottonspinner. Registered without Articles of Association.

**WILHELM'S QUELLE COMPANY (Limited).**—Capital 40,000*l.*, in shares of 4*l.*. To adopt and carry out an agreement for the purchase of mineral waters near Frankfurt, and to import and export them. The subscribers (who take one share each) are—F. B. Behr, Twickenham; A. S. Tweedie, 7, Billiter-square; F. Linklater, 91, Leyham Gardens; H. B. Sedgwick, Lloyd's; G. S. Tweedie, 7, Billiter-square; A. E. Scenes, 7, Billiter-square; E. Casper, 40, King William-street.

**ROBERT JOHNSON AND COMPANY (Limited).**—Capital 12,500*l.*, in shares of 5*l.*. The editing, printing, and publishing a newspaper, and the purchase of "The Southport Visitor," together with the plant, machinery, presses, &c. The subscribers are—S. Boothroyd, Southport; W. Smith, Southport; W. Sharp, Manchester; P. F. Biggs, Southport; R. Johnson, Southport; T. R. Stephenson, Southport; 50; A. Ainscough, Parbold; 20; C. H. Brown, Southport; 20.

**ARNOTT BROTHERS AND COMPANY (Limited).**—Capital 25,000*l.*, in shares of 2*l.*. To purchase of Arnott Brothers and Co. the business of chemical merchants and manufacturers, together with the plant, machinery, &c., and to carry on such business. The subscribers (who take one share each) are—T. R. Arnott, Willenden; J. Hamilton, 11, Old Broad-street; A. M. Lawrence, 11, Great Winchester-street; F. Beckett, Rock Ferry; W. F. G. Blakie, 80, Old Broad-street; G. W. Arnott, Kingston-on-Thames; J. B. West, 2, Old Burlington-street.

**THE ENGLISH MOUNT MANUFACTURING COMPANY (Limited).**—Capital 10,000*l.*, in shares of 2*l.*. To acquire the photographic business carried on at 120, Cheapside and 29, Farringdon-street, and to consolidate and carry on such business. The subscribers are—

W. F. Penfold, Upper Tooting, 50; J. G. Mowell, 32, Bushey Hill-road, 400; W. C. Lee, 200, Long-lane, S.E.; 10; J. Davies, 14, Finsbury-place, 5; J. A. Smith, Barry-road, S.E.; 10; W. W. Hughes, Gunnersbury, 20; F. H. Warrel, 107 and 111, Grove-lane, S.E.; 10.

**THE BRISTOL AND CLIFTON CO-OPERATIVE ASSOCIATION (Limited).**—Capital 5000*l.*, in shares of 5*l.*. To carry on upon co-operative principles the business of butchers in Bristol and Clifton. The subscribers (who take one share each) are—A. H. Vestrum, Clifton; C. S. Graham, Clifton; A. P. Wetherman, Henbury, Gloucester; E. Arthur, Clifton; R. Taylor, Clifton; N. Forte, Clifton; S. E. Taylor, Bristol; W. Spark, Clifton; G. M. Stansfeld, Clifton; W. Barge, Bristol.

**THE STAFFORDSHIRE NEWSPAPER COMPANY (Limited).**—Capital 6000*l.*, in shares of 1*l.*. To acquire the goodwill, machinery, and plant of the "Staffordshire Times," published at Newcastle-under-Lyme, and to print and publish the same and other newspapers. The subscribers (who take one share each) are—H. T. Davenport, Trentham; C. Bill, Cheddle; W. O. Briggs, Newcastle; W. Keary, Stoke-on-Trent; C. Lynam, Stoke-on-Trent; C. Challinor, Stoke-on-Trent; J. Beidon, Newcastle.

**THE CASTLEFORD COCOA AND COFFEE TAVERN COMPANY (Limited).**—Capital 5000*l.*, in shares of 1*l.*. To establish in Castleford and its neighbourhood houses of refreshment, rooms and stalls for the sale of refreshments. No intoxicating beverages. The subscribers are—J. B. Frankley, Castleford; 5; W. Cass, Castleford; 10; W. Gill, Castleford; 10; H. M. Clarke, Castleford; 10; J. C. Sowerbutts, Castleford; 10; J. McCutchen, Castleford; 5; J. Kenshaw, Castleford; 5; G. Perfect, Castleford; 5; J. Craven, Castleford; 5.

**GERMAN BANK OF LONDON (Limited).**—Capital 400,000*l.*, in 10*l.* shares. Taking over the assets, liabilities, and business of the German Bank of London (Limited), and carrying on bank and financial business of every description. The subscribers (who take one share each) are—F. Rodewall, Wimbledon Common; F. Bykett, Folkestone; R. D. Peables, 22, Old Broad-street; C. F. Rodewall, 57, Onslow-square; O. Nestle, 1, Charles-street; T. Sellar, Bagshot, Surrey; M. S. Sultzbach, Frankfurt-on-Maine.

**THE INTERNATIONAL EDUCATIONAL COMPANY (Limited).**—Capital 10,000*l.*, in shares of 5*l.*. The acquisition by purchase of Cambridge House, Blackheath, and the erection of houses for the purposes of schools and colleges of an international character. The subscribers (who take one share each) are—W. Bucher, Blackheath; M. C. Brown, Blackheath; J. Holmes, Blackheath; E. J. Luyon, Blackheath; C. H. Steel, Blackheath; J. B. James, 46, Lodge Hill; C. Peacock, Woodford.

**THE EASTERN AND SOUTH AFRICAN TELEGRAPH COMPANY (Limited).**—Capital 400,000*l.*, in shares of 10*l.*. The construction and laying down lines of telegraph between Aden, Zanzibar, Mozambique, Delagoa Bay, and Natal, and any extension of these lines. The subscribers (who take 50 shares each) are—J. Pender, 18, Arlington-street; F. G. Glover, Barwood; F. A. Bevan, 54, Lombard-street; Sir Daniel Gooch, Clewer Park, Windsor; L. G. Heath, Holmwood; J. Anderson, 66, Old Broad-street; G. H. Richards, 38, Old Broad-street.

**THE CRYSTAL PORCELAIN COMPANY (Limited).**—Capital 5000*l.*, in shares of 1*l.*. To manufacture and sell porcelain and any kind of pottery and earthenware. The subscribers (who take one share each) are—C. J. Jackson, 27, Victoria-road; M. Trowson, 2, Cushion-court; A. Plant, Bromley; Charles A. Allen, 2, Cushion-court; C. Holland, 2, Cushion-court; C. P. Balfour, 2, Cushion-court; N. M. Wylie, North Berwick.

**THE PERPETUAL FIRE INSURANCE COMPANY (Limited).**—Capital 30,000*l.*: 1000 shares of 5*l.* (preference), and 100,000 shares of 5*l.* (ordinary). The transaction of fire insurance in all its branches in the United Kingdom and elsewhere. The subscribers (who take one share each) are—W. R. Plowden, 28, Manchester-street; H. D. Stead, 9, Fenchurch-street; H. J. Maclean, 9, King's road, W.C.; G. Land, 24, Martin's-lane; C. R. Crouch, 75, Old Broad-street; W. J. Bailey, 24, Chancery-lane; H. Massey, 93, Chancery-lane.

**THE NEWTOWN LLANLLWCHAIARN GAS AND COKE COMPANY (Limited).**—Capital 15,500*l.*, in shares of 10*l.*. To purchase and take over the business of the Newtown Gas and Coke Company in liquidation, and any other property. To manufacture, sell, and supply gas in Newtown, Montgomeryshire, and elsewhere. The subscribers are—C. Morgan, Newtown, 198; J. H. Ashford, Newton, 174; W. F. Thomas, Llanllwchaearn, 168; T. P. Jones, Newtown, 163; R. Tilsley, Causwa, 72; G. H. Morgan, Llanllwchaearn, 60; R. Lloyd the elder, Llanllwchaearn, 30.

## WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c.,  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the *Journal* on the Clementina Mine.

In the year 1848, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1848, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommendation to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

**PANDORA.**—With a little more capital and energy in working this might be made a good and profitable mine, but at present it seems quite neglected in the market, and shares are at a mere nominal price. Some months ago we were induced, among others, to subscribe towards 700 shares, of 2*l.* each, and the money so raised was to bring the mine into a paying position. How the finances are at present we cannot say, but we are in a position to speak as to the value of the mine itself. At present it is capable of returning about 20 tons of lead per month, and may do much better when the winze and rise are communicated at the bottom level, on the new lode. In the rise going up from the 33 to the 23 the lode is 4 ft. wide, worth at least 3 tons of lead ore per fathom; and here alone four men might easily raise from 10 to 12 tons per month, and when the communication is made a great deal more. There are, also, other promising points in the mine.

**COMBAMARTIN.**—Three samples of lead ore from this mine have just been assayed. No. 1 produced 70 per cent. of lead and 76*1*/<sub>2</sub> ozs. of silver per ton. No. 2, 67*1*/<sub>2</sub> ozs. of lead and 161 ozs. of silver per ton. No. 3, fahlerz, 15*1*/<sub>2</sub> per cent. of copper and 530 ozs. of silver to the ton.

**CWMLANARCH** is being worked as the "Griffin," but the company, we believe, is almost a private one, and the reports are not regularly published in the *Mining Journal*. They will shortly commence selling lead, and the prospects are good. The Griffin lode, we believe, was first discovered in a cutting of the Bettwycedd Railway, and something like 3000*l.* worth of lead got out, at a profit of about 2000*l.* They are now working on this lode towards Aberllyn; and also driving a cross-cut to intersect the Aberllyn or great Gorse lode. They will take up the waterfall after it leaves Aberllyn for their machinery and dressing-floors. The No. 2 cross-cut, at Aberllyn, is going out to intersect the Griffin lode.

**WHEEL CREBOR.**—The sale of ore (163 tons) realised 519*1*/<sub>2</sub> 11s., or about 3*l.* 3s. 9d. per ton. In our remarks on Aug. 2 we estimated this ore would fetch 3*l.* per ton, and yield about 100*l.* profit, and it has brought rather more. The next sampling (in September) we hope will be 250 tons at least.

**SANTA BARBARA.**—The total profit for the six months ending June is 3986*1*/<sub>2</sub> 17s. 6d., which will enable the directors to declare an interim dividend of 1s. 6d. per share for the half-year, and we presume they will do so. The profit for January was 1033*1*/<sub>2</sub> 7s. 6d.; February, 814*1*/<sub>2</sub> 13s. 8d.; March, 624*1*/<sub>2</sub> 9s.; April, 486*1*/<sub>2</sub> 16s.; May 487*1*/<sub>2</sub> 0s. 7d.; June, 540*1*/<sub>2</sub> 10s. 2d.

The new shaft at Herodfoot will be completed to the 205 in about a week. Clementina is in fork, and we are daily expecting to reach ore in the bottom level. From the level above a good deal of lead was raised, but the old water-wheel was overpowered at the 34, and the mine has been idle during the erection of the present powerful 60-ft. wheel. We believe the prospects to be excellent.

The long, tedious, and somewhat dangerous task of securing the No. 5 level at D'Eresby Mountain, especially in the great run by the underground water-wheel is nearly over, and we hope shortly to have something good to report. It has been necessary to proceed with great caution and put in whole trees as supports; ordinary timber cracked and gave way like matchwood.

Capt. Mitchell is away for a short holiday, and this will account for the absence of reports this week from Parys Mountain and Morfa-du.

**SATURDAY, AUG. 18.**—Market moderately active. Van, Great Laxey, Carn Brea, Crebor, and Tankerville in demand. Van, 18*1*/<sub>2</sub> to 17*1*/<sub>2</sub>; Great Laxey, 18 to 17; Carn Brea, 24 to 23; Crebor, 2*1*/<sub>2</sub> to 2*1*/<sub>2</sub>; Tankerville, 2*1*/<sub>2</sub> to 3*1*/<sub>2</sub>; Roman Gravel, 7*1*/<sub>2</sub> to 8; Dolcoath, 27 to 29; South Frances, 6*1*/<sub>2</sub> to 7; Tincroft, 9 to 9*1*/<sub>2</sub>; Leadhills, 1*1*/<sub>2</sub> to 1*1*/<sub>2</sub>; Peever, 9*1*/<sub>2</sub> to 10.

**MONDAY, AUG. 19.**—Market firm. Crebor, Van, Great Laxey, Carn Brea, South Condurow, Roman Gravel, and Dolcoath chiefly dealt in. Crebor, 2*1*/<sub>2</sub> to 3; Van, 18*1*/<sub>2</sub> to 17*1*/<sub>2</sub>; Great Laxey, 18 to 17; Carn Brea, 24 to 23; South Condurow, 11 to 12; Roman Gravel, 7*1*/<sub>2</sub> to 8; Dolcoath, 27 to 29; Tankerville, 2*1*/<sub>2</sub> to 3*1*/<sub>2</sub>; Peever, 9*1*/<sub>2</sub> to 10; Tincroft, 9*1*/<sub>2</sub> to 10; West Frances, 6*1*/<sub>2</sub> to 7; West Tolgus, 19 to 21; Grenville, 4 to 4*1*/<sub>2</sub>; Parys Copper, 10s. to 12s.; Cape Copper, 27 to 28; Richmond, 7 to 7*1*/<sub>2</sub>.

**TUESDAY, AUG. 19.**—Market for tin shares very firm.—Carn Brea, 25 to 27*1*/<sub>2</sub>; Dolcoath, 27 to 29; South Condurow, 11 to 12; South Frances, 6*1*/<sub>2</sub> to 7*1*/<sub>2</sub>; Tincroft, 9*1*/<sub>2</sub> to 10*1*/<sub>2</sub>; West Basset, 4*1*/<sub>2</sub> to 4*1*/<sub>2</sub>; West Frances, 6*1*/<sub>2</sub> to 6*1*/<sub>2</sub>; Agar, 3*1*/<sub>2</sub> to 4; Peever, 9*1*/<sub>2</sub> to 10; Van, 18*1*/<sub>2</sub> to 17*1*/<sub>2</sub>; Roman Gravel, 7*1*/<sub>2</sub> to 8; West Tolgus, firmer at 20 to 22*1*/<sub>2</sub>; Crebor, 2*1*/<sub>2</sub> to 3; Mellanear, 3 to 3*1*/<sub>2</sub>; East Van, 7*1*/<sub>2</sub> to 15*1*/<sub>2</sub>; Aberllyn, 10 to 12; Herodfoot, 2*1*/<sub>2</sub> to 3*1*/<sub>2</sub>; Glenroy, 7s. 6d. to 10s.; Cape Copper, 27*1*/<sub>2</sub> to 28*1*/<sub>2</sub>; Don Pedro, 8s. to 10s.; Richmond, 7 to 7*1*/<sub>2</sub>.

**WEDNESDAY, AUG. 20.**—Market active for tin shares. Crebor and Leadhills firmer. Van weaker. Carn Brea, 27 to 29; Dolcoath, 28 to 30; Peever, 9*1*/<sub>2</sub> to 10*1*/<sub>2</sub>; South Condurow, 11*1*/<sub>2</sub> to 12; South Frances, 6*1*/<sub>2</sub> to 7*1*/<sub>2</sub>; Crebor, 2*1*/<sub>2</sub> to 3; Leadhills, 1*1*/<sub>2</sub> to 1*1*/<sub>2</sub>; Van, 18*1*/<sub>2</sub> to 17*1*/<sub>2</sub>; Roman Gravel, 7*1*/<sub>2</sub> to 8; East Pool, 13 to 15; Tincroft, 9*1*/<sub>2</sub> to 10*1*/<sub>2</sub>.

**THURSDAY, AUG. 21.**—Market rather quiet, and prices about the same as yesterday.

**FRIDAY, AUG. 22.**—Market rather quiet; South Frances, Crebor, Van, and Leadhills chiefly in demand. South Frances, 6*1*/<sub>2</sub> to 7*1*/<sub>2</sub>; Crebor, 2*1*/<sub>2</sub> to 3*1*/<sub>2</sub>; Van, 18 to 16; Leadhills, 1*1*/<sub>2</sub> to 1*1*/<sub>2</sub>; Carn Brea, 27 to 29; Dolcoath, 27 to 29; Great Laxey, 18*1*/<sub>2</sub> to 18*1*/<sub>2</sub>; Roman Gravel, 7*1*/<sub>2</sub> to 8; South Condurow, 11 to 12; Peever, 9*1*/<sub>2</sub> to 10*1*/<sub>2</sub>; Grenville, 4*1*/<sub>2</sub> to 4*1*/<sub>2</sub>; Tankerville, 3 to 3*1*/<sub>2</sub>; Tincroft, 9 to 10.

**MR. WILLIAM H. H. WATSON** is in a position to BUY or SELL, at market quotations, Shares in all the leading Mines of the day; also to recommend a few for a rise in price. Address: W. H. H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.



## Mining Correspondence.

## BRITISH MINES.

**ABERYLLEN.**—W. Sandoe, Aug. 20: In the sump sinking below No. 3, on the shale lode, there is an excellent lode of rich blende, which cannot fail to yield well. In No. 2 cross-cut, driving west, the forebush is getting wetter, and judging from the highly mineralised character of the ground I shall not be surprised to meet here a productive lode. In the rise in the back of No. 3 there is also some rich blende, but we are rising by the side of it at present in order to keep the blende and shale separate. At the valley or deep adit we are at present walling up the sides, and covering it with timber, thus making a secure entrance to the level, after which we shall push it forward as vigorously as possible. Dressing is being pushed forward with energy, and we are getting down good quantities of blende for our next sampling.

**BLAEN CAELAN UNITED.**—J. Pell, Aug. 21: There is little change to notice since my last week's report, except in the intermediate level driving east into whole ground, midway between the 10 and 20 fms. levels (where there are 26 fms. of back or cover), the side which cut off the ore in back of the 10 was a more joint below the 10, which we have now cut through, and find the lead is much improved, and the ground harder; there are two leaders of lead in the forebush, one 9 in. wide, and the other 6 in. wide, worth fully 2 tons per fathom. The 30 fms. level and other points are without change. We happily escaped all damage from heavy floods on Sunday night.

**BLUE HILLS.**—S. Bennett, P. Vian, Aug. 18: There is not much change to notice in the shaft below the 30 fms. level, the 30 east and the 30 west, 2 ft. wide, and of a promising appearance, although just now it is not of much value. The topes below this level west of the shaft are worth respectively 8s. and 10s. per fathom, and a winze still further west is worth 8s. per fathom.

**BODIDRIS.**—H. Hotchkiss, Aug. 19: The heavy rains on Sunday caused the water to rise several yards above the 45 in this mine, thereby stopping all operations at this level and the level below until today; it is now going down fast, there being only about 4 ft. on the 60. This will be clear by to-morrow morning, so that the men can resume their work throughout. We have, however, been able to do the necessary surface work about the top of the new shaft.

Aug. 21: I am pleased to say the mine is clear of water, and the men are again at work, but there is nothing new to report in the 60 or 45 ends. The lode in the 60 is very promising. We have taken up the rails from this level, and sent them to surface, and are taking down the whim and removing it to the new shaft to-day. This shaft will be made ready to draw by the time we have the whim erected. In dressing the ore from Maw-y-Pwll lode we find it contains a large quantity of white lead in addition to the blende.

**CLEMENTINA.**—William Sandoe, August 19: During the past month we have sent down in the engine shaft the new bottom (8-in.) lift of pumps, taken up to surface the old 5-in. lift of pumps, got the water-wheel again to work, and have cleared the mine of water, and commenced to drive the bottom end north from the bottom of the engine-shaft. This end when we started it was poor, but letting out a great deal of water; since we started the driving the water has much increased and the lode improved; the men broke some very good stones of lead from the end to-day, but from the appearances in the 15, the next level above this, we cannot expect much lead for the first 10 yards from shaft in the bottom level, but then we do expect to enter some excellent lead ground. There are other important and promising points we purpose directing attention to the moment we can clear the mine of stuff, and for this purpose we are now with all energy preparing the winding gear to the small water-wheel; we have the drum fixed, and all in connection with the rope arrives in time. We have also taken out all the rois, bob, pulleys, and all the pumping connections from the shaft to the little wheel, and have enlarged the sump from the 25 to the bottom, fixed ladders in same, and also made a permanent ladder road right down to the bottom of the mine. We have the timber on the mine for pulley stands for the rods to roadside shaft, and have commenced to fix the same, which we will bring to a close as soon as possible. About 20 yards from the roadside shaft there is another small shaft, used in former times as a ladder road, and was most convenient also for ventilation, but had fallen in. This we have again cleared and made a good road to the water level, and when forking out the water here we purpose clearing and making this shaft ready for the same purpose for us. Our new work is now nearly brought to a close, and in a very short time we hope to have the upper part of the mine cleared of stuff, and different points working on lead, and the water cleared from the roadside shaft, with the course of ore said to be there exposed to view.

**COMBARTIN.**—T. Harris, T. Comer, Aug. 21: The lode in the winze sinking below the adit level is altogether about 18 in. wide, containing good patches of rich silver-lead, worth from 3 to 5 cwt. per fathom. The lode has a strong and lively appearance, and we have every confidence that it will further improve. There is a beautiful layer of lead in the west end of the winze that will produce fully 1/2 ton of good lead per fathom when it comes to be stoped. In the north-west end, on counter lode, we have a strong and masterly lode of from 5 to 6 ft. wide, containing beautiful looking quartz and nice patches of good lead ore—a very pretty lode, and we are looking out for a good lode of lead which may be intersected any day. The lode in the south east end is without change since last reported. In the adit cross cut we have intersected another counter lode, with two floeky walls well defined, and about 3 ft. apart. The lode contains nice branches of quartz, with mundle, and a little lead. The lode is also letting out a lot of water.

**OWMYSTWTH.**—Aug. 21: Setting List: Gill's lower level to drive west of No. 1 winze, on new lode, by rock drill; we are still driving by the side of the lode, consequently no lode has been taken down since our last report; the increase of water in the level, owing to the recent floods, has somewhat hindered our progress. The 15 fms. level cross cut to drive north of Pugh's engine shaft; the ground has become hard and tight, being mixed up with small branches of spar and blende, and showing faces of lead, with water all over the end, which makes it slow for driving; but we anticipate reaching the lode soon. In the stopes over Mitchell's level west, on the new lode, the lode is 3 ft. wide, worth 1 ton of lead ore per fathom. In a stopes over Mitchell's level, east and west of western winze, on the new lode, the lode is 4 ft. wide, worth 16 cwt. of lead ore per fathom. In the stopes over Mitchell's level, west of western winze, on the new lode, the lode has improved, now worth 16 cwt. of lead ore per fathom. In a stopes in the back of Gill's upper level, on the new lode, the lode is 3 ft. wide, worth 1 ton of lead ore per fathom. In the stopes over Level Fawr, on the copper lode, we are still meeting with good branches on the north side, which are yielding good saving work for the dressing floors. In the pitch in the back and bottom of the 15 fms. level, east of Kingside lode and branches, the lode is 8 ft. wide, worth 2 tons of lead ore per cubic fathom. In the pitch in the back and bottom of the 25 fms. level, over Level Fawr, on Kingside lode and branches, the lode is 2 ft. wide, worth 1 ton of lead ore per fathom. In the pitch in the back and bottom of the 35 fms. level, over Level Fawr, on Kingside lode and branches, the lode is 4 ft. wide, producing 1 1/2 ton of lead ore per fathom. In the pitch in the back of the 15 fms. level, east of Kingside shaft, on Kingside lode and branches, the lode is producing 16 cwt. of lead ore per fathom. In the pitch in the back of Kingside adit level, east of Kingside shaft, on Kingside lode and branches, the lode is 10 ft. wide, producing 16 cwt. of lead ore per fathom.

**DENHIGHSIDE CONSOLIDATED.**—R. Prince, A. Francis, Aug. 21: On Saturday last we cut into a splendid course of ore in the 68 west; the first three rocks of ore weighed together 2 cwt. We have never met with a longer or more promising course of ore than this. The floods have interfered with us, but we hope to be in full work by the beginning of next week.

**DERSBY CONSOLS.**—William Sandoe, Aug. 19: In the end driving west towards the Cobblers lode the ground is rather easier for driving this week, with frequent joints of spar crossing the end, from which we think the lode is close at hand.

**DERSBY MOUNTAIN.**—William Sandoe, Aug. 10: The No. 1 adit, driving south on the Fuchus lode towards the D'Essey Consols Mine, has been extended in that direction during the past month from 9 to 10 ft. on a lode averaging 2 ft. wide, for blende, and yielding occasionally nice stones of lead ore. There are just a few fathoms ahead of us extensive old workings made in this lode from surface, which we shall soon reach, and where we expect an improved lode for lead, and where we could easily run a shaft through from these workings to the level, which would give a good ventilation, and no doubt open out a section of good blende and lead ground for stoping. In the No. 2 adit coming on under this (No. 1), about 20 fms. behind us, we have also a nice looking lode about 2 ft. wide, yielding some good blende and a mixture of lead ore. Here we have about 10 yards further to drive to come under the good shoot of lead ore passed through in No. 1; here also we expect to meet the same shoot of ore, and calculate on this being the point where, by sinking and rising, we shall effect a communication from one level to the other, and open up stoping ground. In the stopes in the bottom of the No. 2 the lode has improved, and is now worth over 1 ton of lead to the fathom, the lead being in the hanging side, and a horse about 5 ft. wide standing between this and the part of the lode on the heading side. We think it is likely that this ore part of the lode may not have been seen in the No. 3 driving, but may yet be standing in the side of the level. A week or two further working on this part of the lode in the stopes will throw greater light on the matter. At the No. 4 stopes we have two men daily employed preparing stuff for the tramway, blasting up the large rocks, and we hope soon to be able to go in and examine the level south of the stopes, where there is good stoping ground said to be trending in the roof of the level. The men formerly engaged making trials on the Hafna lode in the No. 4 we have (for the present) taken to assist the men spilling through the great run in No. 5, with which work I am glad to say we are making favourable progress, and am glad to say we have got through the worst and most difficult part of the job, and hope to complete the spilling in a short time, probably a few days. The length we have already spilt through is about 27 ft., and the average width about 14 ft., but the next piece of timber supports required will only be about 8 ft., and in 2 yards or 3 yards further spilling we expect it to be only the width of a common level, and so from this it will be seen that we have got through the heaviest part of the work, but what we have got through requires to be further strengthened with additional timber in order to make it perfectly safe to work under. This, however, can be done with little trouble and not much time, and shall be brought to a close as soon as possible. We are getting the small lift of pumps, rods, &c., in readiness to start clearing up the sink the moment we have completed our work in the level, and from all the circumstances we can judge from in this level we fully believe we shall find in the bottom of the sink the course of ore in whole ground, corresponding in dimensions to the opening above now filled with stuff, and which we have described as having spilt through in the level, which cannot be much less than 6 fathoms in length and about 2 1/2 fathoms wide. The dressing goes on with regularity, and all the machinery is in good order.

**DERSBY MOUNTAIN.**—Wm. Sandoe, Aug. 21: I am pleased to inform you that we have to-day got to the end of the great run in No. 5 level.

**DEVON GREAT CONSOLS.**—Isaac Richards, Aug. 20: Wheel Josiah: New South Lode Shaft: In the cross cut south at the 130 fms. level west the ground is favourable for progress. In the 115 west the lode is 2 1/2 ft. wide, consisting of capel, quartz, peach, mundle, and a small quantity of copper ore.—Wheel Josiah: In the cross cut south at the 130 fms. level west the ground is favourable for progress. In the 137, east of Friend's cross-cut, the drive is being carried by the side of the lode for a more speedy progress.—New Shaft, New South Lode: The work in connection with cutting of plat, &c., at the 205 is progressing very satisfactorily. In the 190 the lode part carrying, 4 ft. wide, is worth 4 tons of copper ore, or 12 1/2, and 5 tons of mundle per fathom. In the 190 west the lode part being carried, 5 ft. wide, is composed of capel, quartz, peach, prion, and worth 1 ton of copper ore, or 3 1/2, and 5 tons of mundle per fathom. In Knot's winze, in the bottom of the 190 east, the lode part being carried, 5 ft. wide, is composed of capel, quartz, peach, prion, fluor, some copper ore of good quality, and mundle; worth for length of winze, 9 ft., 7 tons per fathom. In the 175

west the lode is 4 1/2 ft. wide, and worth 4 tons of copper ore, or 12 1/2, and 4 tons of mundle per fathom. In the 175 west, east of Bartlett's stopes, the lode part carrying, 6 ft. wide, is composed of capel, quartz, peach, and copper ore; worth 3 tons, or 6 1/2, and 6 tons of mundle per fathom. In the 115 east the lode is 5 1/2 ft. wide, composed of capel, quartz, peach, mundle, and some copper ore of good quality. In the 100 east the lode is 2 1/2 ft. wide, composed of capel, quartz, peach, mundle, and a small quantity of copper ore.—Railway Shaft: At the 175 the work in connection with cutting top and trip plats is being got on with as fast as the nature of the work will admit, and satisfactory progress is being made. In Northway's winze, in the bottom of the 155 west, the lode part carrying, 4 1/2 ft. wide, is worth for length of winze, 9 ft., 3 tons of copper ore, or 9 1/2, and 5 tons of mundle per fathom.

**DUBBY SYKE.**—W. Vipond, Aug. 15: The men continue sinking in the whin here. There is a strong rib of barytes running through the shaft. This is either the Dubby Syke vein or a part of it. It is impossible to say decisively till more is seen. There are also some small things running north and south, but of no great strength. The vein helps the sinking considerably. No water to cause trouble. As the crib has now come they will get to walling and securing the part of the shaft sunk 12 cwt. of lead.

**EAST ROMAN GRAVELS.**—Arthur Waters, Aug. 21: The 97 cross cut, west of boundary shaft, is driven 7 ft., and the ground of the usual kind. There is no change of consequence in the 88 south since my report last week. The 75 south is worth 18 cwt. of lead ore per fathom; lode letting out water freely. Tribute pitches just as when last fully reported on. Owing to the late severe floods we have had to do some repairs in the old engine-shaft between the adit and surface. We have to-day sampled 25 tons of lead ore and 25 tons of blende for sale next week.

**EAST WHEAL LOVELL.**—R. Quentrell, Aug. 20: There is scarcely any alteration in Severgon shaft since my last report. The lode is 5 ft. wide, and the south part of it is producing stamping work. We are opening on another lode about 6 fms. north of this, and are now about 6 fms. deep, where the lode is 1 ft. wide, containing a little tin, and in a very favourable channel of ground.

**GAWTON COPPER.**—George Rowe, G. Rowe, jun., Aug. 16: The lode in the 117 east is 6 ft. wide, producing good stones of ore, with a kindly appearance for further improvement. The lode in the 105 east is carried 7 ft. wide, yielding 15 tons of mundle and ore per fathom, altogether of a very promising appearance. The lode in the stopes both east and west of winze, below the 105, is worth 8s. per fathom. The lode in the stopes in the back of the 105 is worth 10s. per fathom. The part of the lode carried in the 95 fms. level east is 6 ft. wide, yielding arsenical mundle, with good stones of ore. All other points without change.

**GLASGOW CARADON CONSOLS.**—William Taylor, W. J. Taylor, August 18: The 102 east, on north lode, is producing occasional stones of ore, but not of much value, although the ground is a little more favourable. We have to suspend sinking the winze before this end from the 90 being down to water; the lode is about the same value—15s. per fathom. We are pushing on the 102, expecting to cut this run of ore and further drain this winze for sinking. There is no change in the 102 east, on south lode. The 90 west, on north lode, is still disordered by the shaft cross-course, but we do not expect much change here until we have passed it. The winze in the bottom of the 78, before this end and west of the cross-course, is down 7 fathoms, and the lode worth from 10s. to 12s. per fathom. The 90 east, on south lode, is worth 8s. per fathom. The rise in back of this level is worth 9s. per fathom. The stopes and pitches throughout the mine are looking just as usual, varying in value from 10s. to 15s. per fathom. All our works are being pushed on as fast as possible.

**GORSIEDD AND MERLLYN.**—W. Edwards, Aug. 21: Our underground bargains have been at a standstill this week on account of the heavy floods, but operations will be resumed very shortly; the mine is looking better, and we shall be prepared to sell some ore this week.

**GREAT HOLWAY.**—Aug. 21: Our new engine continues to work splendidly, and very good progress is being made in draining the water. We have placed tributaries to raise stuff in Garden shaft, and hope soon to get a good pile of lead and blende ready for market.

**GREAT LAXEY.**—W. H. Rowe, Aug. 20: Nothing new to report of the sinking of the Welsh shaft below the 247, which has been delayed a little by a slight breakage of the rods. The 247 end north is now evidently entering the regular run of the ground, the lode yielding saving stuff. The same may be said of the 235 forebush, where the lode has for some time past been much disordered, but now in a more settled state, and will probably be productive for a long distance. The 220 end is worth 30s. per fathom. The 210 20s. per fathom. There is nothing special to report of the stopes throughout the deep mine; on the whole, they are turning out a richer class of stuff of late.—Dumbell's: The 215 end north is not so good just now for ore, but the lode is of the right kind, and bound to improve further on. In the 185 cross cut there is no change as yet, but the 170 end has considerably improved, and looking for a still further improvement. Our object being to get ahead as fast as possible in the 140 and 125 ends, we have not properly proved the lode of late, but what we can see shows good indications. On the 140 end, the ore is best near the top of the level, but we get occasionally fine solid pieces from the softness in the bottom part; it is yielding about 1 1/2 ton of ore per fathom. Northward we are working the roof of the level, and at the very top part of this, not far from sump, we have splendid ore going up. I think this is just where we get fairly clear of the plate and into the bottom part of the haze. I have nothing new to report from the new sump this week, as the men have only been working there one day.

**GREAT RETALLACK.**—T. Harris, Aug. 16: I have to-day set the stopes west of shaft at 20s. per ton for No. 1 and 15s. per ton for No. 2 blende, for one month. The lode in the stopes is not looking quite so well for blende as when last reported; worth now from 1 to 1 1/2 ton per fathom.

**GREEN HURTH.**—W. Vipond, Aug. 15: The end south, on No. 1 cross vein, in the 39, continues soft and vandy. There is still no appearance of any cheek on either side. The ore is best near the top of the level, but we get occasionally fine solid pieces from the softness in the bottom part; it is yielding about 1 1/2 ton of ore per fathom. Northward we are working the roof of the level, and at the very top part of this, not far from sump, we have splendid ore going up. I think this is just where we get fairly clear of the plate and into the bottom part of the haze. I have nothing new to report from the new sump this week, as the men have only been working there one day.

**HERODSFOOT.**—P. Temby, August 21: On Saturday last we set the following bargains:—The 205 to drive north, by four men, at 8s. per fathom for 2 fathoms; lode worth 12 cwt. of lead ore per fathom. The same level to drive south, by two men, at 2s. 13s. per fathom; lode worth 15 cwt. of lead ore per fathom. Rise over the 205 for the new shaft, to six men, at 3s. 15s. per fathom; lode worth 18 cwt. of lead ore per fathom. We have about 2 fathoms more to rise to hole to the 190, and I hope the communication will be made next week. No. 1 stopes in the back of the 205 south, to four men, at 2s. 15s. per fathom; lode worth 25 cwt. of lead ore per fathom. No. 2 stopes, to six men, at 1s. 17s. 6d. per fathom; lode worth 15 cwt. of lead ore per fathom. A new stopes in the back of the 205, north of No. 1 winze, to four men, at 1s. 15s. per fathom; lode worth 12 cwt. of lead ore per fathom. The 190 to drive north, at 2s. 15s. per fathom; lode worth 10 cwt. of lead ore per fathom. A stopes in the back of this level, to four men, at 1s. 15s. 6d. per fathom; lode worth 12 cwt. of lead ore per fathom. We have opened the lode in this stopes for 12 fathoms long, and the lode will average from 12 to 15 cwt. of lead ore per fathom. The tribute pitches are without change, producing lead as for some time past. At surface we have taken abroad the water-wheel, and are removing it to the south part of the mine. We are also preparing for fixing the new jiggers, &c. Nos. 1 and 2 parcels of lead are delivered at Lode, and will be shipped next week.

**LADYWELL.**—Arthur Waters, Aug. 21: The tribute pitches here are without change to note since last week.

**LANRWYD.**—Aug. 21: There is no change in the mine to notice this week. The lode in the rise above the adit still maintains its size and value as reported last week, whilst at the 10, above adit, we are still driving by the side of the lode, but from appearances I am of opinion that when next taken down we shall find it improved in value.

**MARKE VALLEY.**—W. George, J. Stenlake, Aug. 21: The ground in the 90 west continues moderately favourable for driving by the side of the lode, which will be taken down by the end of this week that we may give its character, &c., in our general setting report on Saturday next.

**MELANEAR.**—John Gilbert, Aug. 20: The 30, west of Gundry's shaft, was driven 1 ft. 6 in.; the lode is now 3 ft. wide, and producing some good work for copper ore and blende. The 40 west was driven 2 fms. 4 ft.; the lode is 1 ft. wide, producing good stones of copper and lead ores, and looking promising for an improvement. The 61 west, on the south-east part of the lode, was driven 2 fms. 2 ft. 6 in.; the lode is 5 ft. wide, and worth fully 3 tons of ore per fathom. The 60 west, on the north part of the lode, was driven 1 fm. 0 ft. 9 in.; the lode is 2 1/2 ft. wide, and worth 1 1/2 ton of ore per fathom; we are also opening on the north-west part, which is 1 1/2 ft. wide, and worth 4 ton of ore per fathom. The 70 west, on the south-east part of the lode, was driven 1 fms. 5 ft. 6 in.; the lode is 5 ft. wide, and worth 2 1/2 ton of ore per fathom. The 70 west, on the north part of the lode, was driven 3 fms. 1 ft.; the lode is 3 ft. wide, and worth 1 1/2 ton per fathom. The 80 west was driven 1 fm. 5 ft. 6 in.; the lode is 6 ft. wide, and worth 2 tons of ore per fathom. The 90 west was driven 2 fms. 2 ft.; the lode is 6 ft. wide, and worth 1 1/2 ton of ore per fathom. The 100 east was driven 2 fms. 2 ft.; the lode is 4 ft. wide, and worth 2 ton of ore per fathom. The 100 west was driven 3 fms. 2 ft.; the lode is 6 ft. wide, and worth 2 tons of ore per fathom. The 70 cross cut, south of the skip-shaft, was driven 6 fms.; the ground has improved for driving, and the cross-course is getting more mineralised, and letting out an increased quantity of water, which we think are indications that the lode is very near. Gundry's shaft, below the 100, was sunk 1 fm. 1 ft.; this shaft is now down 1 fm. 9 in. ground a little better, but still very wet and spare for sinking. The rise in the back of the 30, west of Gundry's shaft, was put up 1 fm. 5 ft.; this rise is now up 1 1/2 fms., and we have started a 20 fm. level from the top of the rise in a lode 2 1/2 ft. wide, and worth 1 ton of ore per fathom. The winze in the bottom of the 90, west of the skip shaft, was sunk 4 fms.; the lode is 3 ft. wide, and worth 1 1/2 ton of ore per fathom. The winze in the bottom of the 80, west of Gundry's shaft, was sunk 5 ft. 8 in.; the lode is 4 ft. wide, and worth 2 1/2 tons of ore per fathom; the winze will be communicated to the 80 in a few days. The winze in the bottom of the 60, on the south-east part of the lode, was sunk 4 fms. 3 ft.; this winze is down 1 1/2 fms., and we have commenced to drive west from the bottom of the winze in a lode 4 ft. wide, and worth 2 1/2 tons of ore per fathom. We have also set seven pitches, to 20 men, at an average tribute of 7s. in 12.

**MINERAL CORPORATION OF GREAT BRITAIN.**—W. Bennett, Aug. 20: HAFNA AND HIGH HAFNA MINES: No. 3 Adit: The men are making fair progress in driving the cross-cut towards the hanging lode, and it is as pretty a channel of ground as anyone can see for the production of mineral strongly mixed with sulphur mundle, and carbonate of lime. The men have been busily engaged at surface this week cutting water courses, &c., to bring additional water into the new reservoir. Yesterday we again commenced stripping down the lode. It still looks well for lead and blende. The erection of the new water-wheel is rapidly being completed. The contractor informs me that it will be finished next week. We are getting on as fast as possible with our new jiggers, and shall be ready to start the dressing machinery by the time the water-wheel and crushing mill start.

**GREAT D'ESSEY.**—We have now erected the large vertical boiler, and have put in all fittings. The masons are now engaged in building the chimney-stack, which will be finished this week, and we shall then immediately connect the boiler and the engine with the mine and the compressor.

**MONYDD GORDEU.**—J. Green, Aug. 20: The 34 west has entered loose vandy ground, containing gossan, &c., and it has the appearance of being a continuation of the large vandy which made so rich over the 24. A week's work will prove this. In the 24 I have directed the men to cross-cut the lode to full width, as we have driven far enough to reach the new run of ore ground discovered in the 12 above unless it dips very fast westwards. The winze below the 12 is worth 25 cwt. per fathom, and the ground is favourable for progress. No other change to notice.

**NEW BOWFLOD.**—Thomas Kemp, Aug. 21: Middle Lode: The part of the lode opened on by the 73 end, west of Currie's cross-cut, is without any change,

still carrying the branch of lead ore referred to in my last report on the south side of the drive, and from the branch to the north side of level there is also a mixture of ore, but, owing to the light nature of the ground, slow progress is made. The lode in the 52 end, east of No. 2 shaft, is chiefly composed of light-blue killas, carrying small strings of ore. I have directed the men to turn the driving more towards the south; the object of which is to ascertain should the main part of the lode be in that direction. The winze in the bottom of this level is down 11 fms. 5 ft., leaving 1 ft. more to sink to make the depth of the winze from sole level 12 fms.; when done, and the bottom of the winze squared up, at once commence to cross-cut the lode south. From Saturday till Monday morning we had continuous rain here, which flooded the place, and the road was also very much injured and choked up with stuff. We must get this repaired. It is most difficult to go from ore to the mine.

**NORTH TREKERRY.**—Martin George, Aug. 21: The lode in Doctor's engine-shaft, sinking below the 35, is 4 ft. wide, yielding good stones of copper ore, and letting out a large stream of water, with a good appearance. The lode in the 35, west of engine-shaft, is 5 ft. wide, composed of quartz, mundle, and copper ore, but not to value. The lode in the 24, west of engine-shaft, is 3 1/2 ft. wide, and yields ore to value. The lode in the rise in the back of the 12, east of engine-shaft, is 3 ft. wide, and worth 1 1/2 ton of copper ore per fathom. The lode in the 12, driving west of cross-course, is 4 ft. wide, and worth 1 ton of copper ore per fathom. The lode in the rise in the back of the shallow level, west of engine-shaft, is 3 ft. wide, and worth 2 tons of copper ore per fathom. The lode in the end driving west of the rise is 3 ft. wide, and worth 2 tons of copper ore per fathom. We have two pitches working west of the rise, by six men, at 11s. in 12, and four men stoping the bottom at 2s. 15s. per fathom. The dry at the higher part of the mine is now completed, and the arrangements connected with it are such as to afford every necessary convenience and comfort. Our prospects have recently much improved. We sampled on Tuesday upwards of 40 tons of good quality ore, and we hope to have an equal or larger quantity for the next sampling.

**PANDORA.**—H. Nottingham, August 20: The different bargains, working throughout the mine maintain the values given on them in last report, and work is being carried on with regularity. I had intended putting on another set of men in No. 1 winze, new lode, this week, but the water has for some unaccountable cause again risen and filled the sump again, so that I am afraid now we shall not be able to work here till the stopes underneath is holed to bottom of the winze. Dressing, &c., is progressing fairly, and I hope to have our usual quantity of ore for sampling next week. We have, I am glad to say, sustained no damage by the late heavy rains.

**PATELEY BRIDGE.**—C. Williams, Aug. 21: The Rake vein, in the 50 east, is from 5 to 6 ft. in width, producing fine boulders of lead ore, and looking highly promising, and I have every confidence that we shall open into something good here soon. The same vein in the engine sump, now sinking under the 30, is rapidly improving; the hard bar of ground referred to in my last is fast disappearing, and a splendid lode coming in again underneath, consisting chiefly of beautiful gossan, quartz, and rich lead ore, worth of the latter 3 tons per fathom, and every prospect of a further considerable improvement, thus proving the continuation of the ore body in depth, as well as its rich character, although it may at times vary a little in value. In the 30 north-west, on Fiddling's vein, lead strings, the ground in the cross cut is hard and wet, with occasional nice branches of spar and ore crossing the end—a very promising ground. The tribute pitch in the back over this level is looking very well, and worth 15 cwt. of lead ore per fathom. All other points without any change to notice this week. Machinery all in good order, and working well. Dressing and smelting going on regularly, and we can sell 30 tons of pig lead whenever it is thought advisable to do so.

**PENALLIS.**—S. Bennett, P. Vian, Aug. 16: The lode in the 70 east end is 1 1/2 ft. wide, and worth about 5s. per fathom. The stopes behind this level are producing fair quantities of tinstuff, and worth 10s. per fathom. The rise in the back of the 40 west is without much alteration, a large lode and tiny throughout, but not very valuable—4s. to 8s. per fathom. At the flat-rod shaft the lode in the winze below the 30 east is worth 5s. per fathom.

**ROMAN GRAVELS.**—Arthur Waters, Aug. 21: There is no change in this mine worthy of remark since last reported on. The heavy floods—almost continuous wet weather—have seriously interfered with building operations. We calculated upon having the new winze engines fixed by this time, but it would be useless to build walls with the chance of their falling down again. With favourable weather for a week we should be ready to fix the plates, and go on regularly erecting the machines. We have not been delayed on the dressing floors, everything being under cover.

**ROOKHOPE.**—Thomas Tonkin, August 21: Adit Level: The stopes in this level are yielding at present 10 and 12 cwt. of lead ore respectively, and the ground in both stopes looks favourable for an increased production.—The 15 fms. Level: The stopes on side vein near Low shaft are yielding 10 cwt. of ore per fathom, with nice easy ground to work. There is no change in the yield of the stopes near Gin shaft on the main lode.—The 35 fms. Level: The side vein stopes in this level are looking well. The lode is yielding 12 cwt. of lead, and a goodly portion of it produces 15 cwt. of lead ore per fathom. The pump stopes are yielding as usual 10 cwt. of ore per fathom, and the ground generally is easy.—The 42 fms. Level: The drive westward from new winze has improved considerably lately, both in the nature of the ground and production of ore; it now yields above 10 cwt. per fathom. The stopes near the Gin shaft in the back of this level are in stiffer ground, and the yield of ore just now is 10 cwt. of ore to the fathom. The machinery is working well, and the dressing going forward.

**SOUTH CONDURROW.**—William Rich, William Williams, Henry Abraham, August 20: We have resumed driving the 93 end, east of King's lode, which is poor at present, but it looks promising to improve. This level is now well ventilated, and the lode in the back of the 93 is worth 20s. per fathom. The 90 end east is letting out a large stream of water; the lode is large, and it carries native copper between the joints of the rock; it is also worth about 8s. per fathom for tin. The 80, west of Plantation shaft, is worth 10s. per fathom. The 70 end, west of this shaft, is worth 10s. per fathom. The 70, east of King's, is worth 6s. per fms. The rise in the back of the 70 is worth 18s. per fathom. The 50 end, east of King's, is worth 10s. per fathom. The rise in the 50, west of Plantation shaft, is worth 7s. per fathom. The 40 end, east of engine shaft, is worth 8s. per fathom.

**SOUTH DAREN.**—Henry James, Aug. 21: Owing to the excessively heavy floods which fell from Saturday until Monday morning, the water has risen in the bottom levels over our best ore ground. There is no particular change in any of the bargains since last report. The lode in the shaft and 100 west is looking very well. We are pushing with all energy the forking of the water, and the lifts are doing good duty. We sample on Saturday 40 tons of silver lead ore, for sale on the 29th inst.

**SOUTH DE RESBY MOUNTAIN.**—W. Bennett, Aug. 20: Good progress is being made by the men in sinking the engine-shaft; the lode continues to improve as they sink, and I am anxious to say that from 15 fms. down we are daily expecting a good course of lead. The engine and pitwork are going well; and although we have had heavy floods during the past week, there has been no interference with the underground workings.

**SOUTH TOLCARNE.**—Wm. Rich, James Knotwell, Aug. 20: The engine shaft is now down 10 ft. below the 35, and sinking by six men. There is a branch of fluor-spar with spots of copper towards the south side, which will apparently unite with the lode in a fathom or two deeper. The lode in the rise in back of the 35 east has been impoverished by a hard bar of ground, but the ground seems to be getting easier and the lode opening out wider. We have set a winze to sink in the bottom of the adit to meet the water referred to. As soon as a communication is made between these places the mine will be well ventilated.

**TANKERVILLE.**—Arthur Waters, August 21: As a full report will be before the shareholders on Sept. 2 next, I need now only say the various points are yielding ore as for some time past. We have bored a long hole in the 220, or bottom level, east, and bled the water from the cavity seen in the 205.

**TESDALE.**—J. Slack, August 14: The hay harvest is interfering very much with the works both inside and out.—West End Forehead: Only two half shifts have been worked here for a whole week, though the forehead is looking well, a little improved in lead ore, and looks like getting better.—West End Stopes: No. 1: Two men only have been working here, and have shot the bottom of the stopes on to where there was good ore standing in the level roof. This part of the stopes is now very good; if it sets up to any height it will carry between 3 and 4 tons per fathom; we have not had it looking so rich for several fathoms. In the west end stopes No. 2 nothing has been done during the last week.—West End Rise: This has been working with two men every day, and is not much changed. It is kindly, and if anything a little richer towards the south end; I think there is some change near at hand. The level has been opened since last Friday into the west branch.—East Branch: Two men have made themselves a way through into this branch, though the level is not quite ready for the waggon following. Nothing done with regard to dressing and drawing.

**TYN-Y-FRON.**—E. Jones, Aug. 19: We are still laying down the tramroad and cutting down the top in the adit cross-cut, which I think we shall complete this week. We have had a very heavy flood here since Sunday, so that we could not get on with the underground work, but we succeeded in stopping it from washing away any of the blende or lead ore from the floors. The old people say there has not been such a flood at Tyn-y-Fron for the last 27 years.

—J. H. Croucher, Aug. 20: I have visited the mine, and find that Capt. Jones and his men are carrying on the level in the best possible manner,



**WEST WHEAL PEVOR.**—W. T. White, August 21: The shaftmen are engaged this week in dividing the lift, which when done will be more convenient for sinking. This will be completed in the course of a few days, when greater progress in sinking will probably be made. I can speak of no change in the 10 west, on the south part of the lode, and in the cross cut driving north at this level small branches carrying a little tin are continually being met with. We calculate to intersect the other part of the lode in about 4 fms. driving, when I anticipate something very encouraging.

**WEST WHEAL TOLGAR.**—Aug. 22: Taylor's Shaft: The lode in the 155, west of shaft, is 5 ft. wide, yielding 1 ton of copper ore per fathom, and some stones of tin. In the 145, west of shaft, the lode is 4 ft. wide, and yielding 2½ tons of ore per fathom. In the 145, east of No. 1 cross-cut, the lode is 3 ft. wide, and yielding a little saving work for copper ore. In No. 2 winze, below the 145, west of shaft, the lode is 5 ft. wide, and yielding 1½ ton of ore per fathom. In the 135 cross-cut south the ground is a light coloured killas, and better for driving than we expected. In the 125, west on south part of the lode, the lode is 4½ ft. wide, and yielding 4 tons of ore per fathom. In the 125 east, on south part of the lode, the lode is 5 ft. wide, and yielding 4 tons of ore per fathom. The lode in the 115, west of shaft, is 4 ft. wide, and yielding 2½ tons of ore per fathom. In the 115, east of No. 4 winze, is 2½ ft. wide, yielding 2 tons of ore per fathom; worth 10½ per fathom. In the 105, west of the 145, west of shaft, west of No. 4 winze, the lode is 3 ft. wide, yielding 2½ tons of ore per fathom; worth 12½ per fathom. In the 105, east of No. 1 winze, the lode is 6 ft. wide, yielding 4 tons of ore per fathom; worth 20½ per fathom. In the 105, west of the 145, west of shaft, west of No. 2 winze, the lode is 4 ft. wide, and yielding 3 tons of ore per fathom; worth 15½ per fathom. In the 105, east of No. 1 winze, the lode is 6 ft. wide, and yielding 4 tons of ore per fathom; worth 20½ per fathom. In the 105, west of the 145, west of shaft, west of No. 2 winze, the lode is 4 ft. wide, and yielding 3 tons of ore per fathom; worth 15½ per fathom. The 135, west of shaft, is suspended, and the men are put to drive the 135 cross-cut south. The 105, west of shaft, the lode is 4 ft. wide, yielding stones of ore, but not sufficient to value. In the 65, west of shaft, the lode is 3 ft. wide, with occasional stones of ore, and letting out a good deal of water, nearly all of which is coming from the present shaft.

**WHEAL OREBOR.**—John Andrews, Aug. 19: In the 120 east there is no change, but we are now cross-cutting towards the south lode. The lode in the 108 east is worth 10½ per fathom. The lode in the east driving west from the bottom of the 108 winze is worth for the part carried—6 ft.—35½ per fathom. In the 108 cross-cut south we have cut into the south lode 6 ft.; we are not stopping it yet, but so far as cut into it is worth 30½ per fathom. In sinking and through below the 108 the lode is worth 10½ per fathom. The lode in the 108 in the back of the 108 is worth 12½ per fathom. There is no change in the 45 east.

**WHEAL OREBOR.**—John Andrews, Aug. 21: I beg to inform you that we have to-day cut through the south lode in the 108 cross-cut, which is 8 ft. wide, and worth 3½ per fathom. All other points are without change.

**WHEAL PEEVOR.**—W. T. White, Jos. Pryor, Aug. 21: We can speak of no material change in either of our points of operation since our last report, all of which still maintain their usual productiveness, especially the lode in the 80 and 86 fms. levels, in the latter of which the lode is very large and rich in quality. The 26 is also improving as we extend west. We expect soon to communicate the main rise with the deep adit level, which will greatly facilitate our present operations. Our usual returns of tin are being made, and last week we sold 60 tons at the advanced standard.

**WHEAL UNY.**—W. Riehl, Matthew Rogers, Aug. 18: The mine is again drained to the bottom, and the 174 end, west of Hind's shaft, is being urged on by six men. The lode in this end appears to be increasing in size as we extend, and is yielding low quality tinstone. There is an increase of water in the 160 end, east of Gooding's shaft, but the lode is poor. The 160 end west is worth 9½ per fathom. The 130 end west yields a little tin. The 130, east of King's, although unproductive at present, yet it looks promising to improve.

**LEAD MINES.—THE PRICE OF LEAD.**—When Leadville, in America, was discovered its production of lead was to have completely swamped the lead market. How different the result. The latest authenticated advices show that if the mines of Leadville were to be worked for all they are worth the yield of bullion would not exceed 50 tons per day, and at that rate the mines would be completely exhausted within a year. No miner of experience, good judgment, and disinterestedness pretends to claim that the carbonate deposits of Leadville go to the deep.

**PATLEY BRIDGE (Lead).**—The important announcement is made in this week's report that the hard bar of ground which last week had reduced the value of the Rake vein in the sump sinking below the 30 fm. level is fast disappearing, and the lode rapidly improving. The manager writes—"There is a splendid lode coming in again underneath, consisting of beautiful gossan, quartz, and rich lead ore, worth of the latter fully 3 tons per fathom, with every prospect of a further considerable improvement, thus proving the continuation of the ore body in depth as well as its rich character, although it may at time vary a little in value." Referring to the 30 fm. level east, upon the same vein, the manager says—"It is from 5 ft. to 6 ft. wide, producing fine boulders of lead ore, and looking promising."

**WEST PATLEY BRIDGE (Lead).**—THE VALUABLE DISCOVERY. The advices to hand this week state that the Rake vein in the 56 north-west has further improved; it is now a solid leader of lead ore upwards of 20 in. solid, and worth more than 6 tons per fathom. Upwards of 20 fms. have been driven through a continuous ore body, averaging per fathom from 5 to 6 tons of 80 to 90 per cent. pure lead. This 56 is the pioneer level, extending into virgin ground, in advance of which the company owns upon this Craven Cross lode more than half-a-mile of unexplored ground.

**WHEAL AGAR.**—The cross-cut at the 225 is extended 15 ft. into the lode, and sample assayed gives 1 cwt. 9 lbs. of tin per ton of stuff. So far as seen the lode is valued at 30½ per fathom: 381 tons 7 cwt. of tinstone for sale on Friday. The stamps have been put to work on low produce tinstuff.

**BYRN GLAS.**—We are informed that the capital to work this valuable mine is being taken up privately, and if so it is doubtful whether any prospectuses will be issued to the public.

**BYRN GLAS.**—The powerful water-wheel on this mine is now being painted preparatory to starting work. The buildings also have been repaired, and put into ship-shape order. When the mine was worked by the former proprietors, who consisted of a few tradesmen and farmers, it was returning 40 tons of lead monthly from mere scratchings, and had they not quarrelled amongst themselves, which culminated in their closing the mine, this property would, no doubt, be as rich as its neighbours—the Lisburne Mine, which has paid 187½ 10s. in dividends on every 18½ 15s. invested, and East Darren 235½ on every 32½ invested, although neither of these mines have produced anything like the same quantity of lead at the same stage of development as Byrn Glas, which upon the expenditure of a few thousands pounds more will be in a position it is believed to send at least 100 tons of lead monthly to market at a cost of only 200½, the deepest workings being only 23 fathoms from surface, where very rich courses of ore are left standing.

**WHEAL PEVOR.**—This mine continues to look well, and with the improved price of tin increased profits will, no doubt, be shown at the next account. At the last meeting a dividend of 10s. per share, or 150½, was made, and about 700½ was carried forward.

**WEST PEVOR** is on the same productive lodes as Wheal Pevor, and is under the same management. The prospects of this property are of an exceptionally high order.

**EAST BASSET.**—It is rumoured this mine is about being reworked, with a view to cutting the great flat lode, now being worked in Wheal Uny at the 172 fm. level. As the Wheal Uny shaft is about 300 fms. north from East Basset shaft the length on the course of the lode would be about 450 fms. more, or a total depth of 622 fms. from surface. By the aid of boring machinery and renewed vigour of management it is expected anticipations will be realised. The erection of the most efficient machinery instead of the worthless engines working some time ago will materially contribute to this result.

**COMBARTIN.**—Some very rich ore is being raised from the bottom of the winze sinking below the adit level. Three samples of the ore have been assayed, and the result is as follows:—No. 1, 70 per cent. for lead and 76½ ozs. of silver to the ton of ore; No. 2, 67 per cent. for lead and 161 ozs. of silver to the ton of ore; No. 3, 15½ per cent. for copper and 530 ozs. of silver to the ton of ore. The last-named is Fahlerz ore, of which large quantities were raised during the former working, when some of the ore produced upwards of 1200 ozs. of silver to the ton. The lode in the winze shows every indication of leading to a considerable deposit of this rich ore.

**SANTA BARBARA (Gold).**—For the six months ending June last the profits amounted to 3986. This will enable the directors to pay an interim dividend of 1s. 6d. per share for the half-year, equivalent to 30 per cent. per annum.

## GAS AND WATER TUBES AND FITTINGS.

**GALVANISED, ENAMELLED, and HIGH-PRESSURE TUBES, CORE BARS, TELEGRAPH POLES, BOILER FITTINGS, STEAM GAUGES, BRASS and COPPER WORK, &c. &c. SMITHS' WORK, and all kinds of constructive Iron-work. PLANT and TOOLS for Gas and Waterworks, Railways, Tramways, Telegraphs, Chemical Works, Collieries, Breweries, &c.**

**JOHN SPENCER, VULCAN TUBE WORKS, WEST BROMWICH; AND 97, CANNON STREET, LONDON.**

**C. A. SCOTT, METAL AGENT AND BROKER, 7, PARADE, BIRMINGHAM.**

## TO THE METAL TRADE.

**FOR COPPER, TIN, LEAD, &c., apply to—MESSRS. PELLY, BOYLE, AND CO., SWORN METAL BROKERS, ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON. (ESTABLISHED 1849.)**

## The Mining Market: Prices of Metals, Ores, &amp;c

METAL MARKET—LONDON, AUG. 22, 1879.

IRON.	£ s. d.	TIN.	£ s. d.
Fig. 6, f.o.b., Clyde..	2 3 3	English, f.o.b., ..	69 10 0
" Scotch, all No. 1 ..	2 3 6	" bars ..	71 0 0
" Burs, Welsh, f.o.b., Wales	4 12 6	" refined ..	70 0 0
" " in London ..	5 2 6	Australian ..	68 0 0
" " in Tyne and Wear ..	5 0 0	Banca ..	69 0 0
" Swedish, London ..	8 0 0	Straits ..	68 0 0
" Italia, Welsh, at works ..	4 10 0		
" Sheets, f.o.b., in London	7 5 0	<b>COPPER.</b>	
" Plates, ship., in London	5 12 6	Tough cake and ingot ..	50 0 0
" Hoops, f.o.b., in London	6 10 0	Best selected ..	49 10 0
" Nail rods, f.o.b., in London	5 10 0	" Sheets and sheathing ..	64 10 0
		" Flat Bottoms ..	67 10 0
		" Wallaroo ..	62 0 0
		" Burra, or P.C.O. ..	62 0 0
		" Other brands ..	60 0 0
		" Chili bars, g.o.b. ..	53 10 0
		<b>PHOSPHOR BRONZE.</b>	
		Bearing metal ..	£105 0 0
		Other alloys ..	£110 0 0
		<b>BRASS.</b>	
		Wire ..	6½d. —
		Tubes ..	7½ — 7¾
		Sheets ..	8 — 8½
		Val. met. sheath. & sheets ..	5½ — 5¾
		Nails composition ..	— —
		<b>TIN-PLATE.*</b>	
		Charcoal, 1st quality ..	1 2 0 (nom.)
		" 2nd quality ..	1 1 0 —
		Coke, 1st quality ..	0 18 0
		" 2nd quality ..	0 15 0
		Black ..	per ton 16 0 —
		Canada, f.o.b., or f.o.b.,	11 0 0
		at Liverpool ..	12 0 0
		Black Taggers, 450 of	30 0 0
		14 x 10 ..	— —

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1½ 6s. per box more than 10 quoted above, and add 6s. for each X. Terms—plates 2s. per box below tin-plates of similar brands.

**REMARKS.**—The metal market is without material change, but there has been less firmness in some metals, and prices have slightly given way, excepting those for spelter and zinc, which have continued to improve. The reaction is again due to larger supplies than were expected, and which are much beyond the requirements of the market. Producers are becoming the destroyers of their own markets by so repeatedly overloading them with superabundant supplies, unless they soon very considerably curtail their production lower prices are inevitable. It is unreasonable to expect that trade will suddenly undergo any vast improvement. There are already some signs of an awakening from the lethargic state in which it has so long remained, but it is premature to assume that a permanent recovery is about to take place. Here and there the demand has slightly revived, and prices have hardened, but there is no substance yet while in the change, and although the last month may have been a little better than its predecessor, that in itself is no justification for believing in the actual termination of the depression. It would, indeed, be a hasty and dangerous conclusion to arrive at in the present weak and feeble state of the markets, and one that would be greatly calculated to mislead. Commerce is still in a very unsettled and unsatisfactory condition, and the market will require very gentle handling before they can be placed with any degree of safety on a firm basis. True, political affairs are not causing much trouble or anxiety, but the agricultural interests must be suffering immensely from the unfavourable state of the weather, and this cannot fail to exercise a depressing influence over the whole country. There is in fact no powerful incentive to transact much business, and after the usual autumn demand has been satisfied it is very questionable whether sellers will be able to maintain even present prices. Notwithstanding the slightly better tone that has prevailed, and the efforts that have been made to persuade buyers that the markets are decidedly on the upward turn, yet buyers are slow to respond, or to place faith in their stability. The harvest prospects are certainly good for the lateness of the season, the continuance of bad weather, the floods, and the beaten down crops are matters of the most serious importance to the farmers, and far from reassuring to the community at large, and unless the weather at once clears up and is fine and warm for the next six weeks, the harvest we fear will be poor and deficient. High prices of food, low wages, and excessive taxation, must necessarily press hard upon the people, and add to the depression in trade. Money will be wanted to pay for corn, and by the month of October some stringency may be experienced in the money market. Holders, therefore, should be well prepared, perhaps, for a further money leads to depreciation of prices, and a great clearance of old stock will have to be effected before the markets are thoroughly relieved, and a sounder basis provided upon which to base future operations.

**COPPER.**—Another disappointment has been experienced by the holders of copper in the announcement of heavy charters from Chili for the first half of August, there being no less than 3200 tons which would have been ample for the whole month, and, therefore, is just about double the quantity to what was wanted. Holders have been blindly building up their hopes upon light charters, but they are now beginning to get utterly disgusted with such overwhelming supplies. It was at one time thought that the reduced price of copper would exercise some influence in checking supplies; and the accounts published from various places seemed to hold out such a prospect, but quite time has now elapsed to prove its inaccuracy, for the result is that, instead of any falling off taking place, there is an actual increase. We need only refer to the published statistics in confirmation of this assertion. Nevertheless, it is hard to convince holders that their best policy is to realise, and not to be carried away by any speculative views. Prices lately ought to have been reduced and not advanced, as there was not sufficient justification for a rise, and holders would best consult their own interests by discouraging producers to pour upon the market so vast an amount of copper more than is required. The end of it all can be plainly seen, prices must eventually fall, and the last out will suffer the most; a sacrifice must be made, and holders should cut their loss at once, and not wait to see what others are going to do. Sell while a chance remains, for there may come a time when sales are difficult, perhaps almost impossible, without adding considerably to the sacrifice which must even under present circumstances be submitted to.

If any stringency in monetary affairs or forced realisations had to be made by reason of deficient margins on loans, it would undoubtedly be attended with calamitous consequences. The evil exists in the frightful amount of stock which has been accumulating year after year in Europe, to such an extent that its proportions now far exceed anything approaching that of any previous period, and if the least hitch should occur in the management or manipulation of this gigantic hoard it would fall with crushing force upon our market. Such is the perilous position of our market, and the risk to which holders are exposing themselves. If they can sit down tamely, and passively look on while producers are undermining their position, they must expect to receive a thorough and complete blow. The price is being upheld by those who should knock it down. Clearly enough it is fictitious, for the price fails to check supplies, and it is evident that it must yet go considerably lower before it produces the desired effect and any relief can be afforded to the overburdened market. Never before has the market been so unsatisfactory; holders are heartily sick of the market, for there has been nothing but disappointment heaped upon disappointment, and still buyers refrain from purchasing more than enough to supply immediate wants, for the weakness of the market is palpable enough to them, as producers are determined as long as they can realize the slightest profit not to diminish their supplies, irrespective of the existing stock of nearly 60,000 tons. The total stock of Chilean and Bolivian produce in first and second hands in Liverpool and Swansea on the 15th inst. is estimated at 31,371 tons, against 30,454 tons on July 31.

**IRON.**—This market has at last certainly taken a turn in the right direction, and, owing to the improved value of the raw material, sellers of manufactured are becoming firmer in their quotations. The demand, on the whole, has increased, though there are still buyers who will not make contracts at the advanced rates, and prefer to retain their orders in the hope of prices again diminishing. Many of the mills are said to be much more actively employed than has lately been the case, and it is stated that several hands who have remained idle for some time past have again found fresh work. The reports we publish this week are

more encouraging than most of their predecessors, and sellers are sanguine in the continuance of the improvement. It is rumoured that an order has been placed in England for 60,000 tons steel rails. The trade at South Wales is reported to have shown symptoms of a revival, though there are still many works at a standstill, and notices have been issued to terminate contracts at only of the leading mills. This is understood to mean an absolute closing of the works, and also of the collieries connected with them, and the stoppage will probably affect about 1800 persons. There is a fair demand for rails, though prices make no alteration. Clearances continue fair for most descriptions of iron, and a tolerably large order is said to have been given out for rails on American account. The demand for bars is pretty brisk, and shipments to the United States and other large markets are better than was the case a few months back. The trade in the South Staffordshire districts is reported to be gradually improving, and makers are booking larger orders than has been the case for some time past.

There is a much better demand for sheets at Birmingham, and owing to the advanced value of spelter causing galvanised iron to be in more request, and also on account of some good railway carriage contracts with the local stock companies having been made, prices have become somewhat firmer. At some of the manufacturing works there is said to be still great dullness prevailing, and at a few of the establishments the wages dispute continues between employers and employed, and some works can only find employment for three or four days per week. From Sheffield we hear that the miserable state in which the trade has remained during the last two or three years has led to the downfall of many firms, and consequently the little better feeling which is now showing itself is very much appreciated by all. There is a steady demand, and stocks are reported to be decreasing. This is satisfactory, as stocks for some time past have been on the increase, while prices have been continually declining. It is thought that should the slight rally that has occurred increase many of the furnaces that have idle for so long past will be re-lighted. The demand for plates is also said to be a little better, but prices make little or no alteration. The chief cause from which the trade is said to be suffering in this district is not so much the foreign competition as the sale of foreign goods as of home manufacture. The trade at Leeds is at last beginning to show symptoms of an improvement, and many producers of plates are receiving a sufficient number of orders to enable them to work full time. The demand for railway iron keeps limited; nevertheless, it is receiving more of the attention of the trade than has been the case during the past few months, and it is reported that the competition is less felt. Prices, however, though somewhat stiffer, remain nominally unaltered.

The Middlesbrough market is reported firm, and extensive transactions have taken place in pig iron at about 34s. to 34s. 6d. for No. 3. The demand is very fair, and buyers evince more disposition to buy for forward delivery. A better enquiry is anticipated for rails for America, though it is thought this demand at the best will be only limited, as, owing to the cheapness and superiority of steel rails, buyers give them the preference. Common bars are in somewhat better request, and are sold chiefly at 5½ per ton. The Glasgow warrant market has been very active throughout the week, and prices have shown constant fluctuations. On Monday, as buyers showed a good deal of eagerness to purchase, prices advanced to 44s. but, succeeded again to 43s. 9d., and subsequently to 43s. 6d., betwixt which prices large sales have been made, and our market now closes at 43s. 3d. cash and 43s. 9d. one month.

For the week ending August 16, 1879	Tons	68.52
For the week ending August 17, 1878	6,162	
Increase ..	2,400	
Total increase for 1879 ..	60,657	
Imports of Middlesbrough pig-iron into Grangemouth:—		
For the week ending August 16, 1879	6,100	
For the week ending August 17, 1878	5,288	
Increase ..	812	
Total increase for 1879 ..	40,880	

**SPELTER.**—This metal has still further advanced in value, and sellers are firm at the increased rate; nevertheless, the demand is quiet, as the wants of buyers continue limited.

**STEEL.**—There is no change worthy of note in this metal. In some cases sellers have displayed more firmness in their quotations, but for the most part purchases can be made at last week's figures. **QUICKSILVER** has been in good demand, and the price was raised on Wednesday to 6½ 5s. At this importers are very firm. The Californian market has improved fully as much as ours.

**COAL IN BELGIUM.**—In Belgium during 1877, 295 coal mines yielded an output of 13,938,523 tons, and during 1878, 300 mines yielded 14,899,175 tons.

**Messrs. HARRINGTON, HORAN, and Co. (Liverpool).**—After our last issue Chili bars declined to 53½ per ton, since which the market has gradually hardened in price, and to day the quotations are 54½ 5s. to 55½ per ton, according to brand and position of bars. Over 2000 tons changed hands during the fortnight, but as we write there are more sellers than buyers. The sales of furnace material comprised: Aug. 5, 40 tons Italian ore, at 10s. 6d. per unit; Aug. 9, 150 tons Spanish precipitate, at 10s. 9d. per unit; Aug. 11, 150 tons Spanish precipitate, at 10s. 9d. per unit; Aug. 12, 450 tons Spanish precipitate, at 10s. 9d. per unit, 150 tons Spanish precipitate at 11s. per unit, 40 tons English precipitate at 11s. per ton, and 190 tons New Quebrada ore, at 10s. 7½d. per unit; Aug. 13, 100 tons English precipitate, 11s. 1½d. per unit; and at the Swansea sale, on the 12th instant, 1745 tons ore, average produce 12 per cent., realised 10s. 2½d. per unit. A large quantity of Newfoundland copper ore sold here at 10s. 1½d. for 10 per cent. produce. Imports of Chili copper during the past fortnight, 1953 tons fine; delivery, 1035 tons fine. Arrivals here during the fortnight of West Coast, S.A., produce:—Romeo, from Carrizal, 185 tons regulus; Lord Clyde, from Lota, 580 tons bars; Bodrydan, from Valparaiso, 35 tons regulus, 65 tons bars; Galicia, from Valparaiso, 808 tons bars 100 tons ingots. At Swansea: NV. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

COAL IN BELGIUM.—In Belgium during 1877, 295 coal mines yielded an output of 13,938,523 tons, and during 1878, 300 mines yielded 14,899,175 tons.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool).—After our last issue Chilean bars declined to 53*l*. per ton, since which the market has gradually hardened in price, and to day the quotations are 54*l*. 5*s*. to 85*l*. per ton, according to brand and position of bars. Over 2000 tons changed hands during the fortnight, but as we write the time is more selling than buying. The sales of furnace material comprised Aug. 5, 40 tons Italian ore, at 10*s*. 5*d*. per unit; Aug. 9, 150 tons Spanish precipitate, at 10*s*. 9*d*. per unit; Aug. 11, 150 tons Spanish Precipitate, at 10*s*. 9*d*. per unit; Aug. 12, 450 tons Spanish precipitate, at 10*s*. 9*d*. per unit, 150 tons Spanish precipitate at 1*l*. per unit, 40 tons English precipitate at 1*l*. per ton, and 190 tons New Quebrada ore, at 1*l*. 7*d*. per unit; Aug. 13, 100 tons English precipitate at 1*l*. 1*d*. per unit; and at the Swansea sale, on the 12th instant, 1745 tons of average produce 12 per cent. realised 10*s*. 2*d*. per unit. A large quantity of Newfoundland copper ore sold here at 10*s*. 1*d*. for 10 per cent. produce. 100 tons of Chili copper during the past fortnight, 1953 tons fine; delivery, 1035 tons fine. Arrivals here during the fortnight of West Coast 85*l*. produce:—from Carrizal, 185 tons regulus; Lord Clyde, from Lota, 580 tons bars; Bodrydan, from Valparaiso, 33 tons regulus, 65 tons bars; Galicia, from Valparaiso, 808 tons bars 100 tons ingots. At Swansea: *Ni**l*. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool .....	.....	1433	24,971	.....	.....
Swansea .....	998	6505	2,648	.....	.....
Total .....	998	7938	27,619	.....	.....

	1877.	1878.	1879.
Copper in ores ..	8,632	7,404	7,017
Do, regulus and precipitate ..	9,342	10,018	16,168
Do, bars, cakes, and ingots ..	24,978	23,882	27,322
In pyrites (estimated) ..	10,868	8,886	7,203
Total imports ..	53,820	50,280	57,710
Exports ..			
English copper, wrought and unwrought ..	12,711	18,547	18,079
Foreign copper, unwrought ..	8,597	8,882	9,582
Yellow metal ..	10,043	8,932	10,104
Total exports ..	31,351	36,461	37,765

At Truro Ticketing, on Thursday, 2084 tons of copper ore were sold, realising 5974½ 7s. The particulars of the sale were—Average standard, 86½ 12s.; average produce, 6½; average price per ton, 2½ 17s.; quantity of fine copper, 135 tons 4 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per unit.	Ore copper.
July 17 2409 ..	2 84 13 0	6½	£2 1 0	811d.	£44 11 6
" 21 1143 ..	8 3 0	7½	2 1 0	8 10	44 14 0
Aug. 31 2084 ..	86 12 0	6½	2 17 0	8 10	44 4 0

Compared with the last sale, the advance has been in the standard 15s., and in the price per ton of ore about 1s.

**Messrs. FIXLEY and ABELL—GOLD.** The arrivals since our last circular have been unimportant, being only 15,000½, per Monong, from the Brazil, and 3400½, per P. and O. steamer Tchern, from Alexandria. The shipments have been—80,000½, per Bothnia, to New York; 30,000½, per Nova Scotia, to Halifax; 100,000½, per Circassian, to Quebec; 21,000½, in American gold coin, and 130,000 sovereigns have been withdrawn from the Bank.—**SILVER.** No considerable amount of business has been done this week; but the market is firm, the supplies being exceedingly limited at actual prices. Sales have been made at 51½d., 51½d., and 51 13d. per oz. standard—this last rate being the quotation Aug. 31. The P. and O. steamer Decan, leaving Southampton Aug. 21, takes 45,000½ to Bombay. The only arrival has been 10,000½, per Weser, from New York.—**MEXICAN DOLLARS.** The price of the dollars brought by the French steamer and



**R**OYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS  
by the Royal Mail new steamer "COLUMBA," or the "IONA," from  
GLASGOW BRIDGE WHARF DAILY at Seven A.M., and from GREENOCK  
at Nine A.M., conveying passengers for  
OBAN, NORTH and WEST HIGHLANDS. Official Guide Book, 3d. Bill,  
with map and tourist fares, free, at  
Messrs. CHATTO and WINDUS, Publishers, 74, Piccadilly, London; or by post from  
the Owner, **DAY MACBRATNE**, 119, Hope-street, Glasgow.



### Notices to Correspondents.

\* \* \* Much inconvenience having arisen in consequence of several of the Numbers of the past year being out of print, we recommend that the Journal should be held on receipt; it then forms an accumulating useful work of reference.

**ROTARY ENGINE.**—"H. J." (Manchester): From the description given the engine alluded to appears to be the Macfarlane (or Macfarlane) rotary engine, which was fully described in the *Mining Journal* some years ago. It was shown in use at a factory in the City-road, and some arrangements were made for developing the invention by a public company; but nothing is known to have been done towards getting the engine regularly used in a workshop. A reference to the books at the Patent Office Library will enable "H. J." to ascertain whether the patent is still in force.

**SHARE DEALING.**—I should be glad to learn what is the length of time usually considered reasonable for the delivery of the transfer of shares purchased, calculating from the time the money reaches the dealer's hands; and also how long ought to elapse between the dealer's note that shares have been sold and the receipt of the money. I should consider three days an ample margin in each case yet I find that in practice it often takes as many weeks to get the transfer in the first case, and more than as many months to get the money in the second.—*SPECULATOR, Dundee.*

**THRASIE COPPER COMPANY.**—"Scotia" (Edinburgh): There have been some further proceedings in the French Courts by the representatives of Haselden and Goss against the Huella Company, but the decision was again in favour of the company. Men have the privilege of bringing actions in the French as in the English Courts, and thus putting an individual or a company to some annoyance, but constant condemnation in costs is a wholesome counter-irritant, although, French law costs not amounting to one-tenth the English scale, French actions are commenced much more inconsiderately.

**TURBINES.**—Can any correspondent give me any details as to the relative power of turbines and water-wheels with a given fall of water? Assume the head of a streamlet is 100 ft. above the property on which the power is to be used, and that there is 1000 gallons of water per minute, could this be best utilised with a water-wheel or a turbine, what would be the first cost of each, and how many horse power could be obtained? Secondly, if two wheels or two turbines were used—one beyond the other—could twice the power, or anything near it, be obtained? Is there any book which will furnish the information?—*ADVENTURER.*

**Received.**—"W. T. R." (Tucson, A. T.): Next week—"T. W."—"S. N."—"Share holder" (Wheel Basin).—"Engineer" (Glasgow).—"A. F." (Goginam).—"C. B." (St. Day).—"W. W. B." (Whitehaven).—"H. L." (Clewley).—"Iron": The office of the Manchester Geological Society is at 36, George street, Manchester, where the Transactions of the Society can be procured.—T. Bush (Parys Mountain).—"Shareholder" (Tankerville).—"G. H. D."—"Reform" (the ton of 21 cwt.).: Next week.

## THE MINING JOURNAL.

### Railway and Commercial Gazette.

LONDON, AUGUST 23, 1879.

#### OIL SHALES.

As bearing a close relationship to coal of late years a new industry has sprung into importance—that is, the production of oil from shale, the demand for which appears to have increased immensely, Scotland being the seat of manufacture. Paraffin is the principal article produced from the shale, as also naphtha, solid paraffin, and ammonia. Mr. JAMES YOUNG may be said to be the founder of the trade, who, so far back as 1848, had a small petroleum spring which was met with in a colliery at Alfreton, in Derbyshire, and when that became exhausted he endeavoured to obtain the same oils by distilling coal. After many trials he was fortunate in meeting with what may now be termed the famous Boghead Cannel, so well known for its richness in oil. But some shale, it may be said, bears a strong affinity to coal, and this led to a celebrated trial at Edinburgh, in 1853, in which the most eminent chemists, mineralogists, geologists, and others were called upon to decide the very important question as to what constituted coal and what constituted shale. The issue involved important interests, and large sums of money—a lease of a coal field having been granted to a gentleman, who found that it contained a large quantity of excellent and valuable oil, and, instead of selling it in its raw state, he extracted from it the oil, and made vast profits by so doing. The lessor, finding that he had made a rather bad bargain from his ignorance of the material he had given on lease, came to the conclusion that it was not coal from which the oil was extracted, but something like shale, so he brought an action to prevent the lessee from working the oily substance, and as gentlemen on his behalf he produced several eminent scientific witnesses, who declared that the material was not coal. On the other side, however, witnesses equally eminent were called, who declared that the article from which the oil was drawn was coal, and nothing else. The trial occupied five days, when the Lord Justice-General, after a lucid statement, ignored all the evidence that had been given, and made the remark that—"To find a scientific definition of coal after what has come to light within the last five days is out of the question."

Some coal, such as what is known as the "early Cannel," peculiar to the Mold district, in North Wales, gives a large percentage of oil, and at one time was extensively distilled. Some other shales are also rich in oil, and at Barnstaple, far away from any coal field, a bed of shale highly impregnated with oil was found while digging some foundations. It was found traversing the upper Devonian shale. But it is met with most extensively in connection with the coal measures, and now the coal trade is in such a depressed state, and profits out of the question, there is no reason why shale so plentiful should not be worked and made to pay. At the East Ardsley Colliery, near Leeds, we some time since saw the shale raised there being distilled, and in all probability it is at the present time. The oil is in great demand, and the price is such as to leave a good profit, if we are to judge by the dividends paid by one company and the vast sums made by a few individuals, who have had something like a monopoly of the manufacture since it was first commenced. The value of solid paraffin is considerable, and with respect to it LEBIG, the great chemist, said if anyone succeeded in producing it from coal it would be one of the greatest discoveries of the age. This has been accomplished, and from shale we obtain a white, dry, odorless substance, portable, and capable of being burned in a lamp. Paraffin has also been obtained from peat, and at the time of the Irish famine schemes were proposed by which the peat bogs of Ireland were to become a second California. An experiment was made on 100 tons of bog, and it was stated that at a cost of less than 20s. products valued at 90s. were obtained. But the scheme came to nothing. Many years ago, also, some thousands of pounds were laid out in works on Dartmoor, and naphtha, ammonia, grease, and other matters were obtained from the peat. The probability is that the process of distillation was the cause of the failure as much as anything. With our present knowledge, however, of distilling and obtaining oil, the peat bogs may yet be made sources of both profit and employment in extracting from them their oleaginous properties.

Scotland, as we have before stated, has become the centre of the trade through the energy of a few individuals who were well acquainted with the valuable nature of the Boghead Cannel. Mr. YOUNG, after leaving Derbyshire, in conjunction with Mr. MCDRUM and Mr. BINNEY, the geologist, erected works at Bathgate in the centre of the Torbane Hill coal field, and year after year increase their production of oil. Amongst the various works in Scotland nearly 800,000 tons of shale are distilled annually, producing nearly 30,000,000 gallons of crude oil, from which about 12,000,000 gallons of refined oil are obtained, in addition to large quantities of naphtha, solid paraffin, ammonia, and other chemical products. Yet 25 years ago scarcely a dozen persons, we are told on high authority, had seen the article known as paraffin, but it is now produced by the ton to be manufactured into candles and other articles, either perfectly white or delicately tinted by the dyes from coal tar. Large, however, as is the home manufacture, it is considerably below the consumption, so that there is every inducement for mineowners becoming manufacturers, as they would be able to find markets for all they could produce. The oil shales, we may say, realise a higher price than the best coal, the last return giving the average value at 9s. per ton. As to the progress made, we find the returns for 1874 give the output for Scotland at 812,000 tons, Flintshire 270 tons, and

North Staffordshire 3001 tons. But for 1878 the returns give the quantity at 808,704 tons, obtained as follows:—

Cheshire, mixed with Cannel .....	Tons	87,000
Flintshire .....		9,741
Staffordshire, North, mixed with Cannel.....		34,800
Yorkshire .....		11,224
Ayrshire .....		17,009
Edinburgh .....		313,157
Lanarkshire .....		33,238
Linlithgow .....		189,271
Renfrew .....		92,214
Stirling, part of .....		1,050

Total ..... 808,704

Considering the extent of our coal fields, the quantity of shale given above, large as it is, is very far below what could be produced without any addition to the number of persons employed at our mines, while it is evident that the manufacture of oil is about the only thing at all connected with the coal trade that is really profitable.

#### OUR COAL ABROAD.

Our coal exports appear to be still extending. They showed some little dulness in July; but in the seven months ending with July 31 this year they amounted to 9,052,561 tons, as compared with 8,948,814 tons in the corresponding period of 1878, and 8,931,190 in the corresponding period of 1877. Our exports have thus been moving on this year at the rate of 15,552,960 tons per annum, while for the whole of 1869 the corresponding exports did not exceed 10,744,945 tons. The exports thus bid fair to exhibit an increase of at least 40 per cent., comparing 1879 with 1869. But the movement of coal from our shores this year has been really in excess of 15,552,960 tons, as account ought also to be taken of the coal shipped for the use of steamers engaged in the foreign trade. These latter shipments have been moving on this year at the rate of 4,164,660 tons per annum—so that it appears probable that the aggregate movement of coal from our shores in one form or other in 1879 will not be far short of 20,000,000 tons, representing a money value of about 8,000,000L. Truly our export coal trade must be acknowledged to have attained a great importance.

It is noticeable that we have been sending a smaller quantity of our coal this year to the North of Europe—that is, to Russia, Sweden and Norway, and Denmark. The shipments made to those countries been as follows for the first seven months of the last three years:—

Direction of Export.	1877.	1878.	1879.
Russia .....	Tons 705,598	807,752	662,513
Sweden and Norway..	641,298	604,853	511,844
Denmark .....	396,811	374,444	344,602

Total .....Tons 1,743,707 ... 1,787,049 ... 1,518,959

On the other hand, notwithstanding the vigorous efforts which the Germans appear to be making to render themselves independent of supplies of foreign coal, and even to pour their coal into neighbouring markets, we have maintained our deliveries of coal to Germany pretty well this year. Thus, these deliveries amounted to July 31 to 1,035,370 tons, as compared with 943,424 tons in the corresponding period of 1878, and 1,120,023 tons in the corresponding period of 1877. The most remarkable feature in our export coal trade is, however, the increase which appears to be still proceeding in the exports of our coal to France. In the first seven months of this year the French took from us no less than 1,883,568 tons of coal, as compared with 1,804,103 tons in the corresponding period of 1878, and 1,729,889 tons in the corresponding period of 1877. Our coal has been gaining ground very sensibly this year in Spain and Italy; but it has not made much progress in other directions.

The price of our coal has been steadily falling during the last 10 years, as most, if not all of our readers are already aware. This declension is reflected in the fact that the 8,931,190 tons of coal, representing the direct exports of the first seven months of 1877, were valued at 4,572,829L, while the 8,948,814 tons forming the direct exports of the first seven months of 1878 were valued at 4,283,874L, and the 9,052,561 tons representing the direct exports of the first seven months of 1879 at only 4,002,516L. While prices thus stood at about 10s. per ton in the first seven months of 1877, they were little more than 8s. per ton in the first seven months of 1879. The coal "tribute" paid us by the French this year, in spite of the low prices prevailing for coal, amounted to July 31 to 773,749L, as compared with 777,860L in the corresponding period of 1878, and 776,310L in the corresponding period of 1877.

#### THE MINERS' CONFERENCE.

The Conference convened by the Executive of the National Association of Miners, at Manchester, was brought to a close on Saturday, and the business done appears to have been far less practical and sensational than at former gatherings. Mr. MACDONALD, M.P., occupied the chair; but, as reporters were not allowed to be present on the occasion, his eloquent address in consequence has not been made public. From the preliminary proceedings it was evident that an effort was made to impress the public with the belief that the Conference was far more important than it actually was. Certain information was vouchsafed to the reporters who called upon the secretaries, and it was stated that the delegates present represented 197,000 miners. Now, according to Mr. HALLIDAY, this is simply an impossibility. On referring to the Government Inspectors' reports for 1878 we find that the total number of persons employed underground in the coal, ironstone, shale, and fire-clay mines in the United Kingdom above the age of 16 years was 338,148, yet the delegates boldly assert that they represent more than one-half of the whole of that number. We should like to know how the delegates were elected, and the actual members belonging to each of the associations; and, had we these facts, we have no hesitation in saying that it would be found that those present at the Conference did not represent 100,000 adult miners. Mr. MACDONALD, no doubt, has the returns showing the number of persons belonging to each association, and if we are wrong will perhaps set us right. In Scotland there are 48,000 miners working underground above the age of 16; yet Mr. HALLIDAY says not one-sixth of these belong to the Union. In the northern counties there are 73,000 miners above the age of 16; yet we are told that not more than 30,000 of these are connected with the association, which is the strongest in England. South Wales has 31,000 underground workmen above 16 years of age; yet there is scarcely a vestige of an association there. Yorkshire has 41,000, and Derbyshire, Leicestershire, and Notts 24,000 miners; but who will say that one-half of these pay into any Union. Where then, we should like to know, does the 200,000 miners come from that we are told were represented at the Conference? This is a question we think ought to be answered by the Executive, to show that the gathering was really a *bona fide* one, and we shall be happy to supply all the figures given in the returns as to the number of persons employed underground in all our mining counties. The first and most important question brought before the Conference was that relating to migration and emigration. It is evident that there are too many miners in the country, and that the lessening of the number would be a great advantage to the remainder; but the probability is that if many went to America they would also find the mines overstocked with hands, and wages, all things considered, not much better than at home. It was suggested that 10s. per man would give a fund of 100,000L—it was not stated where the 200,000 contributors were to come from—which would be of national benefit. But, for sufficient reasons, the idea of raising such a sum was abandoned. It was, however, agreed that a National Emigration Fund should be established, of a voluntary character, and that money be raised to purchase land and to defray the expenses of members emigrating or migrating; that there be a weekly subscription, and that persons migrating or emigrating be balloted for as soon as the funds are raised. The latter is a necessary qualification, and we are afraid that a considerable time will elapse before we hear of any number of colliers emigrating, and becoming landed proprietors and farmers. The terms, however, are very moderate; for there is to be for every 3d. paid in

a fortnight one chance by ballot, and the members entitled by ballot to the assistance-money shall be entitled to a grant of 6L to go to America, and 10L for going to Australia or New Zealand. The amounts proposed to be given are not such as are likely to entice miners to leave their homes for the chances of a foreign land.

The question with reference to wages was afterwards discussed, as well as that relating to the restriction of the production of coal at the mines. After some discussion it was decided that under present circumstances it was not desirable to recommend the various districts to recommence an agitation for a 10 per cent. advance with respect to wages. As to the proposal for restricting the output, this was not entertained by the congress. This was certainly the best course that could be adopted, for Mr. MACDONALD knows perfectly well that restriction is simply an impossibility, and no doubt the other delegates had the same belief; however, the proposition of which so much was made was most unceremoniously thrown overboard. It was proposed that for the services rendered by Mr. MACDONALD to the cause of unionism, and to the mining body in particular, he should receive a salary of 250L yearly so long as he continued to be a member of Parliament. Seeing that Mr. BURR has 500L a year, no one, we think, will begrudge the stipend to Mr. MACDONALD, which was agreed to by the Conference. Saturday was occupied in the appointment of the officers for the ensuing year, and then the Conference terminated. Of course, the Bill for giving compensation to workmen for injuries was highly approved of, and is to be introduced during the next session. Altogether, the Conference was about the quietest that has yet been held, and as the meetings are free from the intrusion of reporters of course there is a great deal said and done that is not made public, and this, in all probability, is greatly to the advantage of the delegates, who are entirely free from newspaper criticism. In so closing their doors we think the assembled wisdom of the mining community deserve every credit, for not washing any dirty linen they may have in public, or making known the follies of individual members or the squabbles amongst the many.

#### ALBERT MEDALS FOR HEROISM AT ABERCARNE.

The heroic deeds of colliers in attempting to rescue their fellow-workmen after explosions or other calamities underground have frequently been referred to in the *Mining Journal*, but it is only recently that these acts of valour have received public recognition. Although no one who has been at a pit head after an explosion would even suggest that any thought of reward or praise enters the minds of the volunteer explorers when they start on their mission of humanity, it cannot be doubted that it is highly gratifying to them when they have passed through dangers which few but miners would be inclined to face at all, to find that their efforts have been appreciated, and that their names are permanently recorded on the roll of fame. The gratification felt by the recipients of the Albert Medal after the noble efforts to recover the entombed miners at Ty Newydd is well known; and Tuesday's Gazette shows that equally praiseworthy exertions at Abercarne have not been passed by unnoticed.

The Queen has been graciously pleased to confer the "Albert Medal of the First Class" on HENRY DAVIES, collier, Abercarne, and JOHN HARRIS, mason, Abercarne, and "Albert Medals of the Second Class" on WILLIAM SIMONS, pumpman, Abercarne; THOMAS HERRERT, pumpman, Abercarne; MILES MOSELEY, overman, Abercarne; CHARLES PREEN, collier, Abercarne; WILLIAM WALTERS, collier, Abercarne; and LEWIS HARRIS, overman, Abercarne. The following is an account of the services in respect of which the decoration has been conferred:—On Sept. 11, 1878, an explosion of fire-damp occurred in the Abercarne colliery, in the county of Monmouth, whereby 260 persons perished, and on which occasion the greatest possible gallantry was exhibited in saving about 90 lives. The forces of the explosion was terrific, doing great damage to the roadways and to the bottom of the shaft, and setting the coal and timber on fire in several places. Into this state of confusion and apparent danger to life these men without hesitation descended, and although they discovered that fires were raging in the mine, and that consequently the chances of another explosion were considerable, they remained at their gallant and humane work of rescue, not re-ascending the shaft until they had satisfied themselves that no one was left alive below. HENRY DAVIES, after being down the Abercarne Pit all the afternoon with those recommended for the Second Class Medal, volunteered to descend the Cwmcarn Pit (a shaft some two miles distant), with a view of conveying to the explorers, who had attempted to enter the workings from that side, an order from those in charge of the operations to come out, as in consequence of the fires underground continuing to burn fiercely, and large quantities of gas pouring out of the workings, a second explosion was deemed to be inevitable, which had it occurred would assuredly have killed every man below ground. HENRY DAVIES, after being deserted by two men who refused to accompany him further, and when he must have felt there was little or no chance of his coming alive out of the pit, pursued his course alone for 500 or 600 yards, and heroically accomplished the object of his mission. JOHN HARRIS went down the pit with those recommended for the Second Class Medal. Having descended to a depth of about 205 yards, the progress of the cage was stayed by the damaged state of the shaft. JOHN HARRIS got off the cage, and sliding down a guide-rope, reached the bottom, where, although he knew well that any moment might be his last, he remained for many hours, until all who were alive (some of whom were badly burnt and otherwise injured) reached the cage by his assistance, and were taken to the surface in safety.

#### EXPERIMENTS WITH MINERS' SAFETY-LAMPS.

A series of experiments for the purpose of testing the relative value of the various safety lamps at present in use in mines was made, on Thursday, by Mr. Smethurst, at the Garswood Hall Colliery, Bryn, near Wigan, in the presence of the members of the Manchester Geological Society and a number of the mining engineers of the district. For the purpose of the experiments, which have been carried on for some time by Mr. Smethurst, there has been constructed with wooden boards a model of a coal working, consisting of two levels and a cut through of 12 in. by 6 in. section, and three drifts out of the top level 12 in. by 12 in., with brattices up the centre, and with glasses placed in the sides in various parts to enable the spectators to observe the effect produced when an explosion occurred; and to test the lamps which were placed in the model gas drawn direct from the colliery was passed at different velocities, ranging from 500 ft. to 1000 ft. per minute, through the miniature workings. The experiments commenced first with the small Davy lamp,  $\frac{1}{2}$  in. diameter of gauge, and was followed with the ordinary 1 $\frac{1}{2}$  in. gauge used in collieries first without shields, and then with shields placed in different positions, and the result of the experiments was to prove that the smaller the diameter of the gauge the greater was the safety of the lamp.

Experiments were next made with the Scotch lamps, such as were used at the Blantyre collieries; the small workmen's lamp and the large lamp both being tested; but these so soon exploded when they came in contact with the gas that they proved to afford very little more safety than an open light. The Jack lamp with the long glass was next tried, and this proved to be a comparatively safe lamp. The Stevenson lamps followed, and these also proved to be comparatively safe, although they gave only a poor light. The large and small Clanny lamps were next tried, and these gave about the same results as the ordinary Davy lamps. Gray's proved to be a good steady lamp, but the light was uncertain; and Eldin's lamp, which was very similar in construction to Gray's, with the exception that it has a different method of ventilation, which was next tested, also proved to be a very good lamp. The Mueseler lamps, which are at present used in the Belgian mines, were put through a number of tests, and these gave all through the best results of any of the lamps tried. A good steady light was given out; the lamp at once gave an indication of the pressure of gas, and when the explosive atmosphere became dangerous the light was extinguished. Along with this lamp was tried one constructed under the direction of Mr. Smethurst, which gave similar results, except



that the light was not so steady in a strong current, and an adaptation of the Clanny lamp to the Mueseler principle, which also proved to be a very good lamp. Other lamps were also tried, but with the exception of the last three there were very few that were not liable to explode when they came in contact with a large quantity of gas forced upon them by a strong current.

Afterwards experiments were tried by mixing coal dust with the air passing through the model workings, and when the lamps "fired" it was at once seen by the large increase of flame how dangerous an element the admixture of coal dust became in the event of an explosion. The experiments were concluded by a miniature explosion in the model set of workings, for the purpose of showing where the most damage is done in a mine. The point of ignition, which was effected by one of the Scotch lamps, was the farthest from the intake of fresh air, and the greatest damage was done nearest to the intake, and furthest from the point of ignition.

#### EUROPEAN INVENTIONS IN JAPAN.

It appears that although the Japanese have sufficient discernment to recognise the superiority of British products and British inventions, and to profit by the use of them, they have not yet sufficiently studied English jurisprudence to appreciate the necessity of the encouragement given to inventors in this country in order to secure their services, but have preferred the system of ignoring inventors followed in Holland and Switzerland. The imitation of British trade marks by the Japanese has recently been referred to, and the Rising Sun and Nagasaki Express of May 3 notices the imitation of an English invention of a class in which the readers of the Journal are much more directly interested. It appears that a well known firm in Nagasaki recently imported a Jordan's patent rock-drill for use at Inakasima, where blasting is constantly going on, but no sooner did the officials at the Government works at Akenoura hear of its arrival and its excellent results than an exact copy was made, which may now be seen in the Nagasaki Exhibition. The Japanese specimen is excellently made, and reflects credit on those who undertook the work, but the higher question of infringement of foreign patents is one which may fairly occupy the attention of Ministers.

If Japan is to hold her place among the advanced nations of the world a guarantee will have to be given that foreign inventors shall meet with that honesty to which their genius and labour entitle them, otherwise there are but two courses open to inventors and patentees, either to refuse to allow their patents to be imported, or to place such an exorbitant limit upon their goods as will virtually amount to a sale of patent right. We should be sorry, continues the Rising Sun, to see Japan, a young country in the race towards civilisation, fettering herself with such a heavy load as the non-observance of patent rights must necessarily imply, and we cannot help feeling that the matter is one of sufficient importance to commend itself to all well-wishers of the country, the more so as in the present instance this unjustifiable imitation was completed under the eyes of Government officials.

Such unfairness has naturally caused great irritation and annoyance to the firm in this country which purchased the drill, and writing to the inventors—Messrs. JORDAN, SON, and MEHE, of Queen Victoria-street—remark that with reference to the Hand Power Rock Drill, which they purchased for export to Japan, their friends inform them that directly its results were noticed the officials at the Nagasaki Government Factory were set to work to imitate it, and as they have but little doubt that they were successful, and that the machine will in future be made on the spot, they fear that all chance of securing repeat orders—for which they confidently looked—is quite gone. They consider the drill to be especially suitable for use in many undertakings now being carried on in Japan, and think the authorities there were alive to the fact after noticing the result obtained from the machine sent out, and which proved a complete success.

#### LEAD TRADE PROSPECTS IN AMERICA.

The improving prospects of the lead trade in America have been several times referred to in the *Mining Journal* during the past few weeks, but owing to depression which has so long been felt in this country there has been an indisposition to believe that the improvement resulted from other than a mere spurt. It is gratifying to find that this is not the case, but that it is distinctly traceable to the steady development of the country. The Missouri Basin is that upon which the whole United States is dependent for its supply of soft lead, so that the movement of the St. Louis Lead Market really represents the variation of the lead trade of the United States generally. The subjoined statistics, obtained from authentic sources, extending from 1863 to Aug. 1 of the present year, and thus covering a period of nearly 17 years will be of considerable interest to all readers of the *Mining Journal* connected with the lead trade, whether the mines which they are working be situated in this country or abroad:—

Year.	Number of pigs.	Pigs.	Per cent.
1863	79,823	13,212	16.66
1864	93,035	23,601	25.36
1865	116,636	32,948	28.25
1866	149,584	41,268	28.55
1867	144,555	42,480	29.39
1868	185,823	49,636	26.73
1869	228,303	55,973	24.50
1870	237,939	70,268	29.53
1871	229,796	123,411	53.72
1872	225,769	123,411	54.66
1873	356,037	99,754	27.99
1874	479,448	88,355	18.43
1875	579,202	124,471	21.49
1876	665,557	124,471	18.70
1877	790,028	35,671	4.50
1878	754,357	44,922	5.95
1879—July 26	355,431	44,922	12.60

It will be observed that the average rate of increase per annum in the receipts was 19 per cent. from 1863 to 1877, when the maximum was reached. In 1878 the receipts fell off 35,671 pigs, and from Jan. 1, 1879, to July 26 there was a further *pro rata* decrease of about 77,009 pigs for the year. If the same percentage of increase in receipts had been maintained for 1878 and 1879 that had extended through the 16 previous years, the receipts for 1878 would have been 940,133 pigs, and for 1879, 1,118,758 pigs. Instead, therefore, of there being any over supply of lead coming into the St. Louis market, if we take the average basis of increase the deficiency this year will be something like 328,730 pigs, or over 12,000 tons. This decrease in the production in the great Missouri Lead Basin has arisen from several causes:—

1.—Some of the largest and most productive mines where the owners received a royalty of 15 per cent. were not worked, because when the leases expired lead had fallen from the previous high prices, and the owners and lessees did not come to terms. These mines had to contend with an immense volume of water, and were very costly to work. Serious questions arose between the parties in interest, and the leases were not renewed.

2.—About one-third of the entire supply of soft Missouri lead was the product of the labour of prospectors, or men working on tribute on lands where the ore was found near the surface in pockets, patches, and sheets. These miners have been attracted by high wages to Colorado, Utah, Montana, New Mexico, and Arizona. The same labour, therefore, that formerly produced lead in Missouri is now producing it in the argentiferous states in the Far West. This transfer, of course, reduces the output of Missouri in favour of the argentiferous ores; lead from these latter ores, however, requires expensive treatment, pays very high rates for transportation, is a very inferior quality to soft Missouri, and would never be mined except for the silver combined with it.

It is the opinion of experts who have carefully examined into the subject that the argentiferous lead of the Far West will not interfere in the St. Louis market with the virgin lead of Missouri. The

freight alone on pig-lead from Leadville, after the railway is completed to that place, will be 18¢ per ton to St. Louis. It is also stated on good authority that the output of lead at Leadville will be absorbed for local purposes.

The MISSOURI LEAD MINING AND SMELTING COMPANY (Limited), to which attention was drawn at some length in the *Mining Journal* of May 10, must find in St. Louis a very profitable market, as soft Missouri is now 18¢ 9s. 6d. per ton, and the company can deliver it in St. Louis at a cost of 9¢ per ton.

The stock of lead in first hands in New York on Aug. 1 was only about 6000 tons. The consumption of lead in the United States was 73,000 tons in 1878. It is estimated it will require about 100,000 tons to meet the increased volume of business for 1879. If the increased consumption of coal and iron be taken as a guide it would exceed that amount, as the quantity of coal used in 1878 was 17,000,000 tons, while the demands for 1879 have been at the rate of 25,000,000 tons, an increase of 50 per cent. The production of pig-iron for 1879 is at the rate of 2,868,278 tons, as against 2,577,361 tons in 1878, and of steel rails over 1,000,000 tons, as against 882,685 tons in 1878.

And what is the more gratifying is the fact that the prospects of the lead market in the United States indicate no over supply, but rather the reverse. The price has advanced steadily from May— from about 15¢ per ton to 18¢ 2s. 6d., which price is bid in New York, while it is firmly held at 18¢ 1s. 8s. per ton. Under these circumstances the United States will not export any lead, and England will again have the Oriental markets to supply, and which absorb about 16,000 to 20,000 tons per annum. We should, therefore, see much better prices both for British and American lead at an early day.

Crops of all kinds were never finer or more abundant throughout the United States, and they will enrich that country to the extent of hundreds of millions this year, so that if we do not find again in the United States a customer for our lead we shall sell her a largely increased volume of fabrics and various articles of commerce, and by thus helping our trade generally help our lead market indirectly.

MINERAL STATISTICS OF THE UNITED KINGDOM.—In another column of to-day's Journal will be found the first of a series of elaborate articles embodying the Mining Record Office statistics of the mineral wealth of the United Kingdom for 1878. Considering the serious depression from which the country has been suffering, it will give general satisfaction to learn that the mineral produce of the kingdom has declined less than 1,000,000L, the grand total being 67,339,281L for 1878, and 68,281,406L for the preceding year. The price per ton of coal has not declined at all, and even the output has diminished by only 2,000,000 tons, the production still being 132,607,866 tons of the value of 46,412,753L. In 1877 only about 18L worth of gold ore was produced, whilst 1878 shows 702 ozs. of gold better than standard, as it fetched over 4L 1s. 2d. per oz.—the price of some of the best Australian—or 2848L 15s. 2d. for the whole. The 10,106 tons of tin produced averaged over 65L per ton; the 3952 tons of copper nearly 70L, and the 58,020 tons of lead nearly 17L per ton. The cause of the low prices are found in the enormously increased production of foreign mines, without a corresponding increase in the demand, the result of which has been so disastrous to home mines that, taking the case of copper for example, the quantity of copper furnace stuff of all kinds—British, colonial, and foreign—smelted increased from 34,000 tons in 1870 to 62,000 tons in 1878, yet of this the proportion of British was 7176 tons in 1870, and only 3952 tons in 1878, both these quantities being lamentably small when compared with 15,968 tons, the figure for 1860. The low prices have had a slightly good effect in stopping the importation of copper ore, but as the imports of regulus and part wrought remain about the same, the diminishing prices paid to the miners for their ore during the current year is fully explained. The movement in the other metals referred to in the statistics has been affected by similar causes, and consequently show corresponding results.

MEETING IN GERMANY OF THE IRON AND STEEL INSTITUTE.—That a visit to the iron and steel manufactures of the Rhine would be alike interesting and instructive to many members of the Iron and Steel Institute can well be supposed; it is, therefore, gratifying to learn that a communication has been received from Mr. Baere, the general secretary of the Bochum Steelworks, to the effect that some of the most important steel makers in Germany have invited the Iron and Steel Institute to hold their next autumn meeting in 1880 at Düsseldorf, on the Rhine. The initiative in this matter has been taken by members of the iron and steel trade in that neighbourhood, who are also members of the Iron and Steel Institute of England. During next autumn an important Exhibition of Art and Sciences and Industry will be held at Düsseldorf, and excursions to steel and iron works, &c., as well as an excursion up the Rhine to some of the finest parts of that river would be arranged for. As it is thought desirable that some intimation of this idea should be given to the members of the Iron and Steel Institute before the Liverpool meeting the subject is here mentioned. The meeting would certainly be enjoyable, and our German friends are, it appears, very anxious to be at last afforded the opportunity of returning to some extent the many acts of courtesy and hospitality enjoyed by them so repeatedly in England.

EARLY COAL PITS IN YORKSHIRE.—It has been generally understood that coal was not worked in Yorkshire until towards the close of the 15th century, but it has just been discovered that it was known and used at a much earlier date. Recently, in looking over the records of the Coroners' Rolls for certain purposes, it was found that in the 40th of Edward III., or 1367, the jurors from Ossett, Thornhill, Shitlington, and Flockton presented that on the Wednesday next before the Feast of the Nativity of our Lord at Ossett, one Adam Adamson of Gawthorpe accidentally fell into a coal pit and broke his neck, whereby he instantly died. From the same roll it appears that Sharlstone, Crofton, Snydale, and Warmfield presented that on the Monday next before the Nativity of our Lord, in the same year, Margaret, the wife of William de Polby, fell into a sea-coal pit, and by accident was drowned. In the year following, on the Wednesday next before the Feast of St. Martin, Thomas Fytting, digging coal in a coal pit at Flanshaw, was accidentally crushed and killed by a large quantity of roof falling upon him. In the 13th year of the reign of King Richard II., which would be 1390, there is a sum charged as the profits and expenses of the lordship of Wakefield of 6s. for a coal pit at Outwood, which belonged to one John Kirby. In the same year 7s. was paid for a coal pit let to John Collier for the same period. Leland, in his Itinerary, written about 350 years ago, says—"There be plenty of veins of sea coal in the quarters about Wakefield;" and when going from Wakefield to Pontefract remarked—"Almost in the middle way I left coal pits a little off on the right hand, not far from the principal head of the River Went." Outwood, it may be said, at the period named was covered with timber, which must have been used for fuel, for it appears to have been afterwards denuded of timber. The term sea coal appears to have been applied to seams similar to those known in the North of England, and shows also that an inferior quality, in all probability largely composed of shale, was better known. Verily, these old coroners' rolls must contain a vast amount of information which our written history has not recorded, and we are glad to find that the researches of the Mayor of Wakefield, who is the coroner for the honour of Pontefract, has called attention to them, as it is not unlikely that some of our antiquaries and literary students may find in them a rich material of interest to those who desire to be acquainted with the past history of what has grown to be the most important of all the industries of Great Britain.

PROPOSED LOTTERY FOR A COLLIERY.—An extraordinary prospectus has been issued by Messrs. Eaton and Partner, of Chesterfield, for the purpose of "taking in one or more partners" to complete the development of a "proposed colliery at Hady, near Chesterfield," but as the hotel keeper, whose name was given as receiver of the subscriptions repudiated, through his solicitor, any knowledge of the lottery previously to receiving one of the prospectuses issued, and as Mr. W. F. Howard, the secretary of the Chesterfield and Derbyshire Institute of Mining Engineers (the name

of which was also mentioned in the prospectus), was equally prompt in announcing that "neither the council nor any meeting of the institute has to my certain knowledge ever been communicated with on the subject," and that, therefore, the mention of its name was unwarrantable, it is probable that fewer have been taken in than was intended. The most charitable conclusion to draw is that Eaton and Partner are a pair of ignorant labourers, who think that with a 12-horse power engine and the promise of a lease of 20 acres of land supposed to have coal under it, they can make their fortune, and that their ingenuity in framing a lottery prospectus exceeded their knowledge of the law of the matter.

#### REPORT FROM CORNWALL.

August 21.—When we remarked last week, in commenting upon the upward movement in the tin standard, that we believed "the figure would be materially enhanced ere long," we certainly did not anticipate having within a few days to record another rise of 3L. Nor in this were we at all singular. There were those who even doubted the soundness of any rise at all, and certainly that there should be an advance in the total of 5L in a week was far more than could reasonably have been anticipated by any calculation, and forecast as closely as you will, there are vagaries in the tin market that puzzle even the most experienced. We have again and again given our reason for holding that a rise substantial and permanent was certain. Assuredly there is nothing that has taken place of late that would be likely to lead to a different conclusion. Nothing has stimulated production so much as low prices, and the effort to make both ends meet. With a fair return for produce we are not likely to see any material increase in the output of the existing tin mines. Any increased production in this country is far more likely to come from opening up other concerns, to which a continuance of high or reasonable prices would be sure to lead. Against this, however, we have to set the prospects of an increased demand, and these we hold to be favourable, inasmuch as trade can hardly be at a much lower ebb than it is at present, and the balance of change must, therefore, be in our favour. It seems to us that the area and bases of calculation are reduced within narrower limits than they were, and are being reduced still further, and that, therefore, we are gradually returning to a state of things in which it will be once more possible to draw general conclusions from the condition of affairs at home, in which tin mining in Cornwall will be restored to something like its old settled condition, disturbing elements, it is true, still existing, but their influence reduced to a minimum of what it used to be, and at all events more readily appreciated. Probably we shall see some little oscillation in the tin standard before it ascends much higher, but meanwhile the prospects of continuous better prices are certainly good.

Copper shows less inclination to move, though even here there is a revival after stagnation, and the special prospects of some of our mines are looking up. There is West Tolgus, for example, which has cut a new course of ore, and is not unlikely speedily to come back again into the Dividend List. It is only too clear an indication of what the state of things is in regard to copper mining when we find such a mine as South Caradon not falling off in productiveness, but obliged to suspend dividends because of the low price of produce. Copper has fallen back much more in proportion than tin, only our copper mines now are so much fewer than our tin, that this fact has attracted less attention than it deserves.

It would be out of place to comment on the case of Mr. Brydges Williams and the Teign Valley Mining Company, in which the official liquidator seeks to settle that gentleman as a contributory, while it is yet *sub judice*, but we may express our approval of the steps taken by the Vice-Warden to obtain additional evidence. The present position of the case is most unsatisfactory from any point of view.

Well deserved honour has been done to one of the oldest business men in Cornwall by the presentation of a testimonial portrait to Mr. R. R. Broad, of Falmouth, which will be hung in the Town Hall of that borough, with which he has been associated for seventy years. Mr. Broad has had a good deal to do with mining matters, and has long been prominently connected with one of the most prosperous mines in the county—East Pool.

Ample proof of the condition of commercial, and especially of mining, matters in the county is afforded, as usual, by the report of the Cornwall Railway Company. When a county has only one trunk line of railway its traffic supplies a very close test of the prosperity or otherwise of the district. The report for the half-year shows that the gross receipts were 61,722L, as against 64,451L in the corresponding period of last year. The passenger, parcel, and mail receipts aggregated 33,163L, as against 38,651L in the corresponding half-year of 1878. The total number of all classes of passengers carried was 341,145, as against 352,264 during the same period of 1878. The total receipts on account of merchandise, live stock, and minerals was 22,801L, as against 24,915L in the corresponding period. The working expenses for the half-year were 34,375L, against 35,787L. The result of the half-year's working is that the Associated Companies have to provide 5373L to cover their guarantees, as against 3540L in the corresponding half-year.

The bazaar and fête held at Tehidy in aid of the Miners' Association has cleared a net receipt of some 200L. This is very satisfactory, and all the more so inasmuch as there are a good many articles unsold, with which it has been decided to furnish a bazaar at Falmouth at the time of the annual meeting, the week after next.

#### REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Aug. 21.—The Chester Town Council have received a report in which the late poisoning of the fish on the River Dee is traced to the lime refuse that found its way into a tributary stream from the Minera Lime Quarries about Wrexham. In the discussion that ensued upon the reading of the report Mr. Salusbury remarked that the sewage of 100,000 people found its way into the Dee before the Chester people derived their drinking water from it. I have no doubt that Mr. Salusbury is mainly right, and that his remarks are true in a greater or less degree concerning the relation between effluent sewage and the derivation of drinking water from every considerable river in the United Kingdom.

The colliery owners of the district have Mark Tapley's qualification of being "jolly under creditable circumstances." The circumstances could not well be more depressing, nor the utterances of the colliery proprietors at convivial meetings which still abound much more jolly. An illustration of this occurred in the speech of Mr. Darlington, of the Black Park Colliery, at the recent annual festival of the Chirk Union Friendly Society, and I trust there is truth in his remark that "We are on the eve of a turn, and that we have got to the very worst of the depression."

The Quinta Colliery and Brickworks are to be offered for sale, by auction, as a going concern, at the Queen's Hotel, Chester, next Saturday. A little work is now going on at the Presgwyn Colliery, which has been idle for about two years past.

It is reported that at last an ordinary gauge railway is to be made by the London and North-Western Railway Company from Bangor to the slate quarry town of Bethesda. I sincerely hope the report is true. I should also like to see the North Wales Narrow-gauge Railway constructed from the Snowdon Ranger—its present terminus—by Beddgelert to Bettws-y-Coed.

The improvement in the slate trade of North Wales seems to be permanent, and we may confidently hope that the worst is past. A decided improvement has also taken place in the price of lead, which has enabled the principal Shropshire Mine—the Snailbeach—to sell off its accumulated stock of lead.

Holywell was quite gay and festive last week on the occasion of the starting of the new and powerful pumping engines at the Holway Mines. I hope the engine will be powerful enough for the purpose, and that the ore below the great deep level may be won. It may interest persons connected with the mines of Flintshire to read the following description of a visit to this level made in the year 1800 by Mr. Warner, who says:—"Our friend made every necessary arrangement for our seeing the interior of the Great Holway Lead Mines. The entrance lies at the bottom of a hill



near the town, and is called a water-level, penetrating the mountain to the distance of nearly 1700 yards, cut through the rock 6 ft. high and 4 ft. wide. The water, which is a running stream, forms a channel of nearly 3 ft. deep, navigated by boats long, narrow, and flat, sharp at each end, and forced up and down the level by the workmen pushing with their hands against the sides of the rock. This great work was begun about 24 years ago (1776) by a company of gentlemen, who have continued it with unconquerable patience and unremitting perseverance ever since, in spite of the ill success which attended their labours for many years. After having penetrated the rock for 600 yards, the workmen met with a vein of ore that produced about 80 tons, but except this discovery they found nothing to repay the great expense of driving the level, amounting to 6000*l.*, till about four years since (1796), when they struck another vein of great thickness, which they have not yet exhausted. Six men are constantly employed in continuing this subterranean passage, who cut it by contract, having from 4*l.* to 8*l.* per yard, according to the nature of the rock. Mr. Warren describes very vividly the immense underground workings of the mine, and also the nature of the strata. For the first hundred yards the beds are limestone, the next 500 yards consists of chert, "quantities of which are sent into Staffordshire for use in the potteries." Is this so now? Then the tunnel is continued in hard limestone, and at last reaches a huge cavern called the Hotel, because there the proprietors entertained their friends. From the Hotel a level is taken at right angles to the main tunnel into the mountain, leading first to a cavern 17 yards long and 30 ft. high, whose rude sides are encrusted with spar, and its lofty fretted roof covered with beautiful encrustations. Close by was a rich vein 6 ft. thick, dipping down towards the level (northward). Here the miners were at work for 1*l.* 8*d.* per day, the dressed lead ore being sold at that date (1800) "it being a time of war and public misery"—for 7*l.* or 8*l.* a ton. The number of miners and colliers around Holywell at that time was about 700.

The storms of Saturday and Sunday have made sad havoc of the London and North-Western Railway from Chester to Holyhead, washing away bridges and embankments, so that it is calculated it will take a fortnight before the regular traffic can be resumed.

#### REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Aug. 21.—An accident of a serious nature has occurred on the Taff Vale Railway. The engine left the rails on the Cowbridge branch and went down the embankment. A number of persons have been injured, but as yet no deaths are reported. Summonses have been issued against the directors of the West of England Bank, and this *cause celebre* will probably be commenced before the Bristol magistrates on Tuesday next. The report of the Swansea Wagon Company shows that no profit has been made during the 12 months ending June 30, and as a consequence no dividend can be declared. The loss is covered by profits made in the previous year. Bad trade is reported as the cause of this falling off.

An important case, inasmuch as no less than 2500 colliers were interested in it, has been heard at the Tredegar County Court. The case was a test one, and was brought by Wm. Narberth, a collier, to recover the sum of 13*s.* 3*d.* alleged to have been illegally deducted from his earnings during six weeks by the Ebbw Vale Company. The question was whether the company had a right to enforce a reduction of 10 per cent. in wages without, as was alleged, giving proper notice. On the part of the company it was shown that certain notices had been issued in the usual manner, and his Honour gave judgment for the defendant company, and he added that he would give plaintiff a chance of appealing. At the Aberdare Police Court a collier named George Watkins has been summoned for breach of contract towards his employers, the proprietors of the Lletty Shenkin Colliery. Damages to the extent of 10*l.* were claimed. A number of men were also interested in this case. An order was made for defendant to pay 3*l.* and costs, 1*l.* 17*s.* 6*d.* A dispute also exists at the Pentre Colliery, and summonses have been granted against two of the men on strike for illegally absenting themselves from work. There is also a strike at the Rhos Llantwit Colliery, in the Caerphilly district.

There having been a movement made with the view of asking Mr. W. T. Crawshaw, of Cyfartha, to become a candidate for Merthyr at the next parliamentary election, he has replied that he must decline the honour suggested.

The Iron and Steel Trades have been fairly active during the past week. More hopeful anticipations with regard to the American demand can be indulged, and there are two or three orders already reported as being placed in this country. Another question which is now being raised is whether, after all, steel (Bessemer) rails are superior to iron rails such as were made in this district years ago. A correspondent points out that "upon the Great Western Railway between Swindon and Bristol and between Chepstow and Swansea there are large numbers of rails now in daily use which were manufactured in South Wales in the year 1846, and which have consequently exceeded in duration and wearing power anything that has yet been produced in Bessemer steel." As a matter of fact, the iron rail department has not yet reached that state of collapse which many would have us believe. There is at present a rather better enquiry for it. Bessemer steel rails are in fair request. Bars are unchanged. Clearances during the past few days have been small. The Tin-Plate Trade has not materially changed. The men seem still indisposed to accept the reductions in wages asked for. The demand for coals is good, and since affairs have been settled between masters and men there is more work doing at several of the pits. At the house pits there is more business observable in the Rhymney Valley. The quantity of steam coal cleared is large, but, as will be seen by the returns published below, last month's shipments fell off considerably. House coals are in average request. Patent fuel is a slow sale. Prices are unaltered. The Coedcae Colliery Company have succeeded in reaching the Nine-foot seam of steam coal at their pit in the Rhondda Valley, near Pontypridd. Other valuable seams of coal are proved to exist in the pit.

Last month Newport shipped 10,831 tons of iron, against 12,354 tons in the corresponding month of last year; Cardiff, 6180, compared with 6056 tons; and Swansea, 405, compared with 12 tons. In the same period Cardiff shipped to foreign ports 323,483 tons of coal, compared with 365,630 tons; Newport, 69,340 compared with 80,777 tons; Swansea, 55,006, compared with 57,809 tons; and Llanelly, 3722, compared with 6448 tons. Cardiff shipped coastwise 56,182 tons, against 78,470 tons; Newport, 71,971, against 79,563 tons; Swansea, 40,755, against 21,907 tons; and Llanelly, 12,258, against 13,763 tons. The clearances of patent fuel were—Cardiff, 13,314, compared with 19,713 tons; and Swansea, 10,181, compared with 12,485 tons.

The Queen has conferred the Albert Medal of the First Class on Henry Davies, collier, and John Harris, mason, both of Abercarn, and the Medal of the Second Class on six others, for services rendered by them in saving life on the occasion of the explosion at the Abercarn Colliery on Sept. 11 last. The statement accompanying the official announcement of the honour thus conferred upon Davies and Harris and their companions shows that the reward was well deserved. These men, especially the two first, had, with a simple courage by no means exceptional under such circumstances, placed their own lives in imminent peril that they might rescue the survivors of one of the most terrible explosions recorded in the annals of Welsh mining. The explosion resulted in the death of 260 persons, and but for the exertions of Davies and Harris that number would have been increased to more than 350. The severity of the explosion had destroyed most of the gearing, and had blocked the workings to an extent which rendered egress from the drifts exceedingly difficult. These two men descended the shafts as soon as possible after the explosion, forced their way from point to point, and aided the survivors in their escape. We have spoken of these acts as acts of courage, for though the men were themselves probably unconscious of any motive other than that of the impulse to save the lives of those who had been placed in peril by the explosion, they were strengthened and guided by a resolution and confidence which constitute the highest form of heroism. They had no personal object to gain. There was no thought of reward or honour.

They knew that if the lives which had been spared by the explosion and the after-damp were to be saved they must be saved at once, and without thought of the risk which must be incurred in accomplishing that object they entered upon their task. Acting on such impulse, they discharged their self-imposed duty in a manner which merited and has received the highest recognition. Their names have been placed on the roll of the new Order, and the only regret is, that services equally distinguished have no such record, for the simple reason that the Order is itself of recent creation. There is no field of danger so rich in true heroism as that of the mining industry of the United Kingdom, and none, we are proud to think, will contribute so many names as recipients for the Albert Medal.

#### TRADE OF THE TYNE AND WEAR.

Aug. 20.—There is little change to report since our last. The Steam Coal Trade is quite as good, and all the first-class works in Northumberland are regularly employed; and if this continues, which is almost certain to be the case, some of the works closed owing to the depression will be restarted shortly. A large quantity of this coal has been shipped for export, and the sailing of vessels in the coasting trade has also been above the average during the past week. In Durham the works are not so fully employed, but some of the best gas coal works are fully employed six days per week, and at Pontop Colliery one of the pits closed some time ago has been reopened. The coking trade continues rather flat, and this also is the case with the trade for manufacturing coal. The house coal trade is also quiet, but there are signs of improvement in this branch also. The shipment of coal at Tyne Dock and other important points has been large of late—90,000 tons per week is considered an average at Tyne Dock, but this was exceeded during the past week, and on Tuesday 22,000 tons were shipped there, which is the largest quantity ever shipped in one day. The shipments at the Sunderland Docks have also been large.

There is no attempt made either on the part of the masters or men in this district to restrict the output of coal, and some of the works are kept going 12 days per fortnight. There is still a good supply of hands of all kinds for collieries, but the number of men unemployed is fast being reduced; this is partly owing to emigration. The exodus of coal miners, which commenced some time ago, goes steadily on, and appears to increase. The greatest number of men go to the American Continent, but a considerable number have also gone to New Zealand and to Australia. The accounts received from those men who have gone to Australia are favourable, they can earn much better wages there than in this district at present, and the coal trade there has improved much lately. From America the men do not report favourably, but some improvement has taken place of late in the coal and iron trades there also.

The improved feeling in the pig-iron trade continues, and prices are slowly but steadily rising. Makers are inclined to ask higher rates than the quotation of last week, which were—No. 1, 37*s.* 6*d.* to 38*s.* The indications are that the value of iron will be enhanced next month, as the markets in Scotland, the Midlands, and in South Wales are improving, and the accounts from America are also encouraging. It is possible that this prosperous state of trade may not continue—a relapse may possibly occur, but at present the impression prevails that this will not occur. There is more disposition to buy for forward delivery at present, but sellers wish to secure higher prices. There is a better demand for bars, and prices are 5*d.* per ton. At Middlesbrough, on Tuesday, the market was firm, and a great deal of business has been done during the last few days at about 31*s.* net, No. 3. This was the price consumers offered that day, but makers' quotations ranged from 34*s.* 6*d.* to 35*s.* net, and most of them are pretty firm at this figure, grey forge being 33*s.* to 35*s.* 6*d.* The attendance has been small, owing to local rains. The stock in Connell's stores stood at 81,900 tons. A slight reduction in the quantity held last week. Pig-iron producers are rather encouraged by the extra shipments coastwise to Scotland especially; last month the smallest quantity for many years was forwarded. Last week showed the highest record for a very long time past. The quantity shipped from Middlesbrough on Scotch account being 6100 tons. Altogether about 17,000 tons were shipped from the Tees and adjacent ports for foreign and coastwise account. The advance of prices in the Scotch market within the past few days has been considered a good omen in this district, as also the better reports from South Wales and other districts. Messrs. Bolckow and Co. are reducing the wages of the men at their steelworks at Eston. About 2000 tons of steel rails are turned out per week at this concern.

The wages question in the iron trade is also to be considered this week at Darlington. Shipbuilding on the Tees is very quiet. The demand for plates is slack. On the Tyne iron shipbuilding continues fairly prosperous. Engineers, on the whole, are only moderately employed. Founders are many of them well off for orders at present. The Chemical Trade continues firm, and it is evidently improving; the trade is free from fluctuation, and the business done is *bona fide*, not speculative. The tone of business is well sustained. The consumption of salt and other raw material shows that the manufacture of chemicals is large, and at the same time stocks are not large. It is pretty evident that the trade is well clear of needy sellers at present, and that the trade which is doing is *bona fide*. According to the telegraphic advices which are coming to hand daily the movement of the North Country steamers are very active, and this large fleet of useful vessels contributes a good share to the great changes which are taking place in the carrying trade of the world. It is true that only small profits have been earned lately by steamers, but some slight improvement in this respect has occurred, and the prospect is rather cheery at present.

LEAD MINING AT ALSTON.—As noticed some time ago an attempt is to be made to get the dues to the lessors reduced in this district. Should this be effected, which is considered likely, it is expected that a larger number of men will be employed. This trade has been in a very dull state for some time. The lead mines in the Weardale district are improving, as there are some young mines there, such as Green Hurth, Dubby Syke, &c., which are considered to be very promising, some valuable lodes having been proved and partly opened.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

Aug. 21.—The decision come to by the Duke of Devonshire with respect to the mineral dues on lead ores raised in the districts in which he is the lessee has not yet transpired, but there is no doubt but what it will be favourable, if not to the extent asked. Some few mines appear to be doing tolerably well, but the majority must be having a hard time of it, for with lead at the price it is it is not easy to see how mining can be profitably carried on. The falling off in our imports, however, lead many persons to believe that we are on the eve of a marked change for the better, but it appears premature at present to come to such a conclusion. Ironstone mining is not carried on to the extent it was a few years ago either in the Chesterfield or Erewash Valley districts, in consequence of the rate at which it can be obtained in Northamptonshire and Lincolnshire. Recently there has been a better demand for Derbyshire pig, and there is now some prospect of a general improvement with rather better prices. At Dronfield there has been a steady out-put of Bessemer rails, and one of the partners in the firm, Mr. Wilson, has succeeded in producing a composite plate of steel fused in iron that is likely to be adopted by the Admiralty. In some experiments made a few days ago at Portsmouth the plate was not penetrated by the heavy projectile with which it was attacked, the deepest crack made having been only about 1-18th of an inch. It is, therefore, likely that Sheffield, where the plate was made, will still maintain the position it has long held as the great producer of armour-plates for the British as well as other navies. Of late coal for household purposes has gone off tolerably well, and several of the principal collieries in Derbyshire have sent a large tonnage for the time of the year over the Midland Railway to London and the South. Still there are a good many colliers totally unemployed, and at a few places the wages question is still in an undecided state. The price of coal is certainly at a point at which profits cannot be

made, and there is no likelihood of an advance, just at present at least. The consumption of coke appears to be increasing in Sheffield and the districts, so that there has been an increase in the production.

In several of the Sheffield branches of trade more is now being done than for several weeks past, both on home account and for exportation. The old staple industries, such as cutlery, saws, files, edge tools, and scissors, are not particularly active, but several of the heavy branches are much better off. More is being done in armour-plates, as well as in lighter ones for boilers and ships, whilst there has also been an improvement with respect to tyres and axles. Of late there has been a falling off at one or two establishments in Bessemer rails, but fresh orders are coming to hand that are likely to keep the mills fully going. Iron rails are not much enquired for, and are now principally made for collieries. Some of our colonies, however, continue to be good customers for steel rails and general goods, and we are now looking forward to an active season for sheep shears, although some little opposition has been shown on the part of continental makers, who produce a cheaper but an inferior article. Railway and other springs are quiet, but a steady business is still being done in telegraph wire. The foundries are still comparatively quiet, even for light and ornamental castings for builders, the demand for which is usually brisk at this time of year.

In South Yorkshire the Coal Trade is much as it has been for the last two or three weeks, but as colliery owners state that they are working without profit, and in some instances at a loss, a change at several places must inevitably take place. The present rate of wages cannot be maintained unless there is a change for the better, and there is no appearance of this taking place. The London trade keeps up very well for the season, and a steady business is being done in steam coal for shipment from Grimsby to the Baltic. A considerable number of miners are now walking about, as several collieries are still standing, whilst others are under notice to leave unless they submit to a reduction of wages. At Carlton Main, one of the largest collieries in the district, a number of the men refused to submit to a reduction of wages, and refusing to give up the houses held by them from the company, have been ordered to be ejected if they refuse to give up peaceful possession.

On Monday a petition in bankruptcy was filed in the Barnsley County Court on behalf of Mr. Joseph Carnelley, coal merchant, of Barnsley and Bradford, and late a director of the Stanhope Silkstone Colliery, now in liquidation. The liabilities are estimated at 15,000*l.*, and the assets are not likely to be large.

AMERICAN ORDERS FOR BESSEMER RAILS.—It is understood that a house in Sheffield has just secured an order from America for 15,000 tons of Bessemer rails, and that another order is likely to be secured by another firm in the same place.

At Ilkerton the men employed at the collieries of Messrs. Barber and Walker have received notice of a reduction of wages. The men have been working nine hours a day, and it is expected the proposed reduction will be accepted.

THE OAKS EXPLOSION.—A committee having been formed some time since to collect subscriptions for the erection of a monument in Ardsley Churchyard to the memory of the men who were killed by the explosion in 1866, upwards of 80*l.* has been received, and as more subscriptions are expected an order has been given for the execution of the work to Mr. Oxley, who erected the memorial in Darfield Churchyard to the men who were killed by the explosion at Lund Hill in 1857.

A cheque for 100*l.* has been received from Mr. C. Markham, the managing director of the Staveley Iron and Coal Company, towards the Library Fund in connection with the Stephenson Memorial Hall at Chesterfield.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Aug. 21.—At the meeting of the Iron and Coal Trades in South Staffordshire this week a decided improvement was manifest. The change for the better which set in last week has gone on, and has increased. Buyers are now seriously calculating whether they have not remained out of the market quite long enough, even if not too long, and the conclusions to which some of them, at any rate, have arrived are seen in the larger number of orders which iron makers and coal owners are this week receiving. And the better sale is accompanied with better prices. Raw and manufactured iron produced in this and other districts is stronger than at the date of the last report, and consumers' offers, based upon the quotations which then existed, are being refused. The most important feature of the finished iron market is that galvanised sheets have been advanced variously from 15*s.* to 1*l.*, and 1*l.* 5*s.* per ton, because of the rapid upward tendency of the spelter market. Users who have refrained from buying as long as possible are now ordering at the rise, but merchants who do a foreign trade refuse to believe in its permanency. Makers, however, are generally firm at the advance, and will not accept less than 14*l.* for 24 gauge delivered in London in bundles. Tin-plate makers, too, are firmer, and some of them seek a rise of 2*s.* a box on coke plates. The condition of the coal trade is more satisfactory than recently, and if the iron trade should continue to improve the demand at the pits will be considerably augmented. The colliers are once again intimating their intention of waiting by deputation upon the leading masters to ask them to advance the price of coal, so that they may secure better wages.

At the close of 'Change hours in Birmingham, on Thursday afternoon, leading galvanised sheet firms were declining to accept the prices they quoted in the morning. Some makers were strong at 15*l.* for 24-gauge in bundles in London. The holders of spelter demanded a rise of 30*s.* upon the previous day of 20*l.* per ton, for a continental telegram had been received announcing sales at the outports at over 19*l.* Consumers held back, yet vendors would not abate their demand. One or two sales of black sheets followed at 5*s.* advance.

The directors' report of the Cannock and Huntingdon Colliery Company, just issued, referring to the accident which occurred at No. 1 pit last June, when twenty-six of the iron tubs, with which the shaft has to be lined, sunk to the bottom of the pit, states that it is hoped that by the end of this month the raising of the tubs will be commenced by Mons. Chaudron, by the aid of special machinery. In No. 2 pit the excavation to the full diameter has been completed to a depth of 412 ft., but owing to a difference in the level of the coal measures at the two pits it is proposed to continue the sinking to about 443 ft. The directors report with great satisfaction that Lord Hatherton has promised to make important concessions in the matter of the minimum royalties.

The North Staffordshire coal and iron trades remain disturbed by wages disputes. The number of collieries in the Silverdale district where notice has been given for a reduction of 10 per cent. or an increase in the working hours has augmented since my last report. The men on their part still maintain a bold front of resistance. There is a report that ironworkers in the Smallthorne district, on the other hand, have commenced working six extra hours a week rather than suffer a money reduction.

A special general meeting of the shareholders of John Bagnall and Sons (Limited) was held at the Grand Hotel, Birmingham, on Tuesday, Mr. Edward Gam in the chair. The report and accounts for the six months ending June 30 was submitted by the Chairman, who explained the means the directors had taken to stop unprofitable portions of the concern, and to cut the expenses down to the greatest possible extent. It was stated, in answer to a shareholder, that supposing the securities received from Mr. Albert Grant were to realise nothing, there would be 16,000*l.* to earn before any dividend could be paid. The securities in question were, however, expected to be worth something, though how much remained to be seen. Several shareholders expressed their approval of the efforts made by the directors and manager, and the report was adopted with but one dissentient.

SKERNE IRON COMPANY, (Limited).—It will be recollected that some time since an offer was made to the creditors of this company, through a London firm, to accept 15*s.* in 1*l.* cash down, in settlement of all claims. The creditors, regarding the unseizable condition of ironworks property and the uncertainty of realisation, have almost without exception accepted the offer, and on Tuesday received at the



hands of the firm which made the offer, Messrs. R. Allen, McLeans and Co. of Old Jewry, London, the stipulated sum. Nothing has transpired as to what is to be done with the works of the company which stand at Darlington, and are capably laid out for the production of ship plates and also bridge work.

**SALE OF SHARES.**—Messrs. Farrington and Son, on behalf of the trustees of the late Mr. I. Highway, and others, offered the undermentioned shares for sale by auction, at their sale rooms, the Bridge, Walsall, on Tuesday, 100 shares of 100s. each (20% paid) in the Staffordshire Joint-Stock Bank (Limited), sold in lots of from 10 to 50 each, at 23s. per share; 120 fully-paid shares of 10s. each in the Sandwell Park Colliery Company (Limited) were offered, and 30 were sold at 12s. each, the remainder being withdrawn, no advance on 11s. 15s. being obtained; 60 fully-paid shares of 10s. each in John Bagnall and Sons (Limited) were sold in one lot at 5s. each. No offer could be obtained for the following:—55 shares of 10s. each (3s. paid) in the Staffordshire Wheel and Axle Company (Limited); 20 fully-paid Preference shares of 25s. each in the Birmingham (Blakeley Hall) Coal and Ironstone Company (Limited); 173 fully-paid shares of 1s. each in the Walsall Agricultural Hall Company (Limited); 5 fully-paid shares of 1s. each in the Builder's Trade Circular Company (Limited); 3 shares in the Willingworth Colliery Company, 10s. shares (8s. paid); and 2 original 100s. shares (84s. paid-up) in the West Cannock Colliery (Limited).

**PARIS EXHIBITION, 1878—A STRANGE ECONOMY.**—Messrs. Tangye Brothers, of the Cornwall Works, Birmingham, write:—At the close of the above Exhibition our firm were informed that they were awarded three medals—one each gold, silver, and bronze. The gold medal was delivered a short time since; but we have now received from the Commission a certificate stating that we have been awarded silver and bronze medals, and also an intimation that this certificate is in lieu of the medals! It reminds one of the assignats of a former French Republic; and the cost to the Republic will be about the same. At the last French Exhibition we were also awarded two gold medals, and were told that we could have them upon sending the value of the gold, which we need hardly say we did not do. Doubtless the French Government sees the need of economy, and loses no opportunity of practising it.

**BRITISH AND AMERICAN STEEL GOODS.**—Despite the high tariff and the intensity of American competition in steel rails for railways, several American orders are being placed in England. One order for 15,000 tons has been secured by Brown, Bayley, and Dixon (Limited), Sheffield, and another for a similar quantity has gone either to Barrow or Ebbw Vale, and there is a probability that an order for 10,000 tons more will be placed at Sheffield. The price at which the contracts are entered into is not positively known. It is, however, a few shillings above 4s. a ton, a price which leaves but little margin of profit. The reason of the orders finding their way to this country is that English manufacturers are able to offer lower terms than their rivals in America. There can be no doubt that the iron and steel trade is improving. There has of late been much more enquiry than for months past, and in many instances orders will be booked. The prices, however, are so low that manufacturers frequently decline to take them.

## THE COLOMENDY COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.  
Capital £20,000, in 4000 Shares of £5 each.

### FIRST ISSUE OF 2000 SHARES.

Payable £1 on application, £1 10s. on allotment, and the balance in calls as may be required.  
The Shares may, if desired, be fully paid up in advance of calls, receiving interest thereon at 5 per cent. per annum.

#### DIRECTORS:

Subscribers to the Memorandum of Association, the first four of whom will act as Directors until the First General Meeting of the Company.

JAMES ASHWORTH, Esq., Engineer, Southport.  
JOHN ASHWORTH, Esq., Mine Surveyor, Manchester.  
FORSTER GREEN, Esq., Merchant, Belfast.  
CHARLES ELCOCK, Esq., Merchant, Belfast.  
THOMAS EMMOTT, Esq., Cotton Manufacturer, Oldham.  
B. A. DOBSON, Esq., Machinist, Bolton.  
GEO. W. TAYLOR, Esq., Accountant, Manchester.

#### BANKERS.

THE NATIONAL PROVINCIAL BANK OF ENGLAND.

#### SOLICITORS.

Messrs. GOFFEY and NORTH, Solicitors, 15, Lord street, Liverpool.

#### AUDITORS.

Messrs. THOMAS, WADE, GUTHRIE, and CO., 12 and 14, Marsden-street, Manchester.

SECRETARY—Mr. GEO. W. TAYLOR.

REGISTERED OFFICE—MOLD.

#### PROSPECTUS.

This company is being formed for the purpose of purchasing, continuing, and extending the business of the Colomendy Brick, Tile, and Clay Company, Limited (hereinafter called the "Old Company"), carried on by them at Tyddyn, Glan Alyn, and Colomendy respectively, all situated near the town of Mold, North Wales.

The property comprises buildings, plant, machinery, stocks on hand, and three leases under which the lands used therefor and in connection therewith are held. The Old Company was registered in 1875, but out of the subscribed capital the proportion available for working purposes, after payment of vendor and expenditure on buildings and plant, being inadequate, additional moneys were borrowed, with unsatisfactory results; and it has, therefore, been deemed desirable that under and by means of a voluntary liquidation the entire property might be acquired by the new company as a going concern and as a whole.

The machinery and plant are modern and in working order, and as now arranged are capable of turning out 80,000 machine made bricks per week. A siding of about 300 yards in length connects the brickworks with the London and North-Western Railway, and the distance by road to Mold being only 1½ mile, the works are thus most favourably situated for readily placing their manufactures in the market. The holding is under a lease for 28 years from 24th June, 1875, at a rental of £18 per kiln of 1650 cubic feet, with a minimum of £54 per annum.

Glan Alyn there is a large deposit of very pure silica with an admixture of fire-clay, largely used by iron and brass foundries for lining cupolas, some of the leading engineers of the kingdom stating it to be far superior to any other sand in the market.

The present sales average 60 tons per week, but these might easily be increased to 120 tons, and the quantity proved is estimated as sufficient for about five years' working at this increased rate.

At Colomendy is a deposit of sand similar to that at Glan Alyn, but if anything of rather better quality, which has not been worked by the Old Company, as they were able to meet all their sales from Glan Alyn. It has, however, been proved by other parties, and must, without doubt, be considered a very valuable part of the company's property.

The sand both at Glan Alyn and Colomendy can be worked easily and cheaply, and the quantity at the latter place is amply large enough to far outlast the terms of the leases at any reasonable output—say, at 500 tons per week.

These two properties are held jointly under leases dated 22nd November, 1875, for a term of 21 years, from 1st July, 1875, at a royalty of 6d. per ton of 21 cwt. on the sand, with a minimum rent of £100 per annum.

By agreement dated 25th June, 1879, made between the Liquidators of the Old Company of the one part, and James Ashworth for and on behalf of the present company of the other part, it is provided that the purchase money for the whole of the property mentioned in paragraph 2 of this prospectus, with the goodwill, shall be £26750, to be paid partly in cash and partly in shares, as therein expressed.

A statement has been carefully prepared to show the results which may be confidently anticipated from the first six months of the company's trading.

From this it appears that, at a very low estimate, the sales at Tyddyn would amount to £2146 during the half-year, and those at Glan Alyn to £1080, making together £3226. Two contracts have been proposed with respectable parties, according to the terms of which the cost of producing and preparing for sale goods of the above value would be at Tyddyn £680, and at Glan Alyn £630, making together £1290, which would leave a gross profit of £2936, and after deducting £236, for rent, management, and charges, there would be a net profit of about £2600.

There is, however, but little doubt that in subsequent years the sales, and consequently the profits, may prove considerably in excess of these calculations.

As there are large stocks of bricks at Tyddyn and of sand at Glan Alyn ready for sale the company will be able to commence trading immediately on taking over the works, without any delay whatever.

The only contract or agreement entered into is that for the purchase referred to above, as dated June 25, 1879, made between the Liquidators of the Old Company of the one part, and James Ashworth, for and on behalf of the present company, of the other part.

#### CARDIGANSHIRE.

In the parish of Llanbadarn-Fawr, about five miles from Aberystwith, and two miles from Bow Street Station, on the Cambrian Railways.

A HIGHLY DESIRABLE AND COMPACT FREEHOLD ESTATE OF ONE HUNDRED AND THIRTY TWO ACRES.

Comprising an excellent FARM of 109 acres, known as RHOSGOCH, in the occupation of Mr. John Jones; also a small FARM of 17 acres, called GWARDROW, in the occupation of Mr. David Lewis; and the freehold GROUND RENTS and REVERSIONARY INTEREST IN ELEVEN LEASEHOLD COTTAGES.

**MR. G. T. SMITH** is instructed to SELL, BY PUBLIC AUCTION, at the Belle Vue Hotel, Aberystwith, on Wednesday, the 27th day of August, 1879, at Three o'clock in the afternoon, the above property, which is bounded by the estates of Sir Pryse Pryse, Bart.; the Trustees of the late T. O. Morgan, Esq.; J. W. S. Bensall, Esq.; and others.

It will first be offered in One Lot, and, if not so sold, the two farms will be put up together, and each leasehold separately.

The property is in the immediate neighbourhood of Bronfloyd and other mines, and valuable deposits of lead ore are believed to lie underneath the estate.

Plan and particulars, with conditions of sale, will shortly be ready, and may be obtained from Messrs. TALBOT and WOODNAM, Solicitors, Newtown; EVAN POWELL, Land Agent, Llanidloes; or from the Auctioneer, Aberystwith.

#### VALUABLE MINING PLANT, OHIO, ONCHAN, ISLE OF MAN.

**MR. THOMSON** has received instructions from the Coroner of Middle Shelding to SELL, BY AUCTION (under due process of law), on Thursday next, August 28th, at Eleven o'clock, the extensive and valuable

#### MINING PLANT.

The property of the MANX SILVER-LEAD MINERAL COMPANY (LIMITED).

Comprising excellent WATER-WHEEL, 30 feet diameter, 4 feet breast, wrought-iron axle and crank wheel, 6 feet diameter; superior DRAWING MACHINE with patent friction couplings; 120 fathoms wire rope, sheaves, &c.; flat-rod and T-bolt joints and pins; head gear; 35 fathoms of main rods; strapping lugs; 7 in. plunger lift, 35 fathoms long; 7 in. drawing lift, 18 fathoms long; 6 in. drawing lift, 20 fathoms, with valves, buckets, and rods, all in good condition; 6 in. ram, with H piece and bottoms to match; upwards of 70 fathoms of iron stave ladders; 60 fathoms of light railway metals; 60 fathoms wood railway, plated with iron 1½ by ½ in.; wagons, drawing kibble (iron), small drawing kibble, jack rolls, crab winch, steel jumpers, hammers, picks, pinch bars, wheelbarrows, wooden blocks, dressing tools, a quantity of iron, powerful screw; 30 fathoms 5/8th cable chain, grindstone, superior right-hand dial, about 125 fms. of water trough, smith's bellows, anvils, vice and boring machine attached, two sets of stocks and dies, sledge and other hammers, two stoves and piping, timber, blasting powder, and dynamite.

14 in. SUPERIOR BRASS TURBINE, 10-horse power, with large cast-iron and pipes, manufactured by the Canal Head Foundry, Kendal.

Very superior "RELIANCE" AIR COMPRESSOR, manufactured by Hathorn and Co., London, capable of working from four to six drills (this machine is equal to new, it having only been in work for a short time); ROCK DRILLING MACHINE, with 39 drills, all in good order; about 130 fathoms of 2-inch air pipes and hose to match; expander, with 188 yards of cable; crushing mill; two newly-erected, wooden houses, a range of wooden houses, used as a changing house, smithy, storeroom, with numerous other articles connected with a mine.

Steamers leave the landing pier for the Isle of Man.

JOHN KERRISH, Coroner of Middle Shelding.

#### DUNSELY WHEEL PHOENIX TIN MINING COMPANY (LIMITED).

**MESSRS. SKEWIS and SON** are instructed by the Liquidator TO SELL, AT AUCTION, One Lot, on Tuesday, 2nd September, 1879, at Four o'clock in the afternoon, at Webb's Hotel, Liskeard, the undermentioned

#### VALUABLE MINING MATERIALS AND PLANT.

With or without the SETTS, as may be determined at the time of Sale, viz.:—ONE 40 inch ROTARY WINDING AND PUMPING ENGINE, with 10 ton MILLER; 60 fathoms 10 inch pitwork; lot of 7 inch pumps; 75 fathoms 2½ inch round iron rods; 50 fathoms ½ inch; new 12 head stamp axle; hammered iron lifters; balance bobs; shaft tackles; smith's bellows; 70 fathoms 2½ inch tram iron, with a lot of other useful materials.

The sett is situated immediately between Phoenix United and Marke Valley Mines.

The whole may be viewed on application to Mr. J. J. SIMMONS, Phoenix United Mines, Liskeard.

Dated Langstone House, Bideston, 14th August, 1879.

#### IN LIQUIDATION.

#### SANTANDER ZINC MINING COMPANY (LIMITED).

**MESSRS. J. AND C. B. PARSONS** will SELL, BY AUCTION, at the Auction Mart, Tokenhouse-yard, London, E.C., on Tuesday, the 9th September, at Two o'clock, by order of the Liquidator, the

#### LEAD MINES

Belonging to the above company, situated at RABAGO, near San Vicente, in the province of SANTANDER, SPAIN.

These mines have been worked for lead ore from 1874 to 1878. Nearly 100,000 tons have been expended in developing them. A powerful steam engine and machinery for dressing lead ore has been erected at a cost of over £2000. A good house is built on the property for the manager. Tools, weighing machine, furniture, rails, tramway, and various articles, valued at £350, will be included and offered in One Lot.

This is a first-class opportunity for any party who can command £4000 or £5000, as in the first cross-cut there is a large quantity of lead in sight, and about 100 tons underfoot in the stope. The gallery has been driven 300 yards on a lode 17 ft. wide towards the mine, where ore of 80 per cent. was found but could not be taken out for the great influx of water. Another 80 yards will cut the ore under the winze and drain the same.

A further outlay of about £300, for extra buddles and crusher will make the mine capable of bringing out a large quantity of dressed ore monthly, at a profit of £3 to £4 per ton.

A market has been found for any quantity of lead ore at San Sebastian; and owing to a decision of the Government, the French company's road adjoining the Rabago Mines can be used without paying any fees, reducing the cost of transport from 2½s. per ton to 8s. 4d. per ton.

For further particulars apply to the auctioneers, 16, High Street, Bristol; or to the liquidator, care of Messrs. Fox and WHITTUCK, Solicitors, 35, Corn Street, Bristol.

#### PRELIMINARY.

#### IN LIQUIDATION.

#### ROOKHOPE LEAD MINING COMPANY (LIMITED).

**MR. HERBERT FULLER** has received instructions TO OFFER BY AUCTION, at the Mart, Tokenhouse-yard, E.C., early in September, all the

#### LEASES, PLANT, MACHINERY, &c.,

Belonging to the said company.

Particulars will shortly be issued. In the meantime information can be obtained from Messrs. HANCOCK, SHARP, and HALLS, Solicitors, 74, King William-street; from the liquidators, 8, Austin Friars; and from the Auctioneer, 1, Queen Victoria-street, E.C.

#### IMPORTANT SILVER-LEAD MINE FOR SALE.

TO BE SOLD, BY AUCTION, within Dowell's Rooms, No. 26, George-street, Edinburgh, on Wednesday, the 10th September, 1879, at Two o'clock P.M., that—

#### VALUABLE SILVER-LEAD MINE.

Situated in the ISLAND OF SARDINIA, called GIBBAS.

The sett, which is extensive, is within a mile of Porto Corallo, where the mine is shipped in barges, and is distant about thirty miles from Cagliari, to which there is a good Government road. There is a full equipment of pumping, drawing, and dressing machinery on the mine.

#### SHORT REPORT.

"Llanbadarn, Cardiganshire, 1st August, 1879.  
"Having had charge of the Gibbas Mine during the campaign of 1877-8, and being well acquainted with the metalliferous features of the sett, I am of opinion that with a moderate outlay judiciously applied the mine will produce large and profitable returns of lead ore."  
(Signed) S. Y. DUNN.

For particulars, apply to Mr. JAMES MARTIN, C.A., 49, Castle-street, Edinburgh; or to Messrs. GILLESPIE and PATTERSON, W.S., 81A, George-street, Edinburgh, Scotland.

#### COLLIERY PLANT.

#### HOWARD'S WEST HARTLEY COLLIERY, NETHERTON, NEAR MORPETH, NORTHUMBRIA.

FOR SALE, the PLANT, &c., of the above COLLIERY, consisting of—300 tons D.S. IRON and STEEL RAILS, with CHAIRS, FISH-PLATES, POINTS, and CROSSINGS; 300 tons 18 lbs. BRIDGE and 28 lbs. EDGE RAILS; 400 CHALDRON WAGONS, wheels W.I. tyres; WINDING, PUMPING, and HAULING ENGINES; HORIZONTAL ENGINE, 15 in. cylinder; GIBBAL FAN; sets of 16 in., 17 in., and 19 in. PUMPS, complete; 5 in., 5 in., 8 in. FLANGE and SOCKET PIPES; FOUR LOCOMOTIVE ENGINES; SIXTEEN BOLTERS, double drum and egg-ended cylinder; COAL TUBS; STONE TIP WAGONS; 16 in. LATHES, and usual MATERIAL about a Colliery.

Apply to WEAR and COLLEY, 33, Broad Chare, Newcastle-upon-Tyne.

FOR SALE (on account of the death of the proprietor),—THE RHOS ANTHRACITE COLLIERY, LLANELLY, SOUTH WALES.

Connected with the Railway System of the country, and with the Ports of Swansea and Llanelly.

This Colliery with the present low price of coal is worked at a fair profit.

Also, the GORSGOCH COLLIERY and BRICKWORKS.

For particulars, apply to W. ROSSER, Esq., Civil and Mining Engineer, Llanelly, South Wales.

MINERAL CRUSHER, WATER-WHEEL, &c., in SOUTH DEVON.—FOR SALE (A BARGAIN).

IRON WHEEL, 18 feet, 16 inch breast; ONE WROUGHT-IRON RAFF-WHEEL, and ONE PAIR 14 inch CRUSHER-ROLLS, and all other PLANT in connection with same.

Address, Mr. BROMLEY WHITE, Liverpool Chambers, Bristol.

#### TO COLLIERY PROPRIETORS AND OTHERS.

IN ORDER TO CLEAR OFF A LARGE QUANTITY OF WAGON MATERIALS at less than COST PRICE, through the failure of Baxendale and Heald, and Simon Leach, both of Chorley, in the county of Lancaster, and Llantrisant, South Wales, wagon builders, PARTIES REQUIRING WAGONS will please furnish specification and apply for tenders to the undersigned.

SMITHWORK, CASTINGS, BOLTS, NUTS, and other materials suitable for repairs, ON SALE.

Apply at the Works, or to the undersigned—  
DAVIES and BEE, Accountants, 5, Winckley-street, Preston.

TO LET, ON LEASE, for twenty-one years, or such term as may be agreed upon, the VERY VALUABLE MINERAL and COAL MINES, extending over an area of 200 acres, near Wrexham, in the county of Denbigh, North Wales, part of the property known as the

#### STANSTY HALL ESTATE.

Containing MAIN, POWELL, and BRASSY COAL, varying from 3 to near 12 ft., and the TWO YARD COAL, and other good and large seams of coal, near the Westminster and other collieries, being the richest and most productive mineral properties in Denbighshire.

Proposals will be received for working the whole or any portion of the above premises not less than 30 acres, stating the minimum or dead rent recoverable out of royalties, in excess of the sum offered, and stating the amount per foot per statute acre offered to be paid for Main, Powell, Brassy, and Two Yard Coal, also per foot per statute acre for all other seams workable.

A line of rail is in progress of being constructed through the estate, which will greatly enhance the value of the mines.

Also TO BE LET the MANSION, HOUSE, and DEMESNE of STANSTY.

Proposals to be addressed to Lady FRENCH, Elm Park, Merion, Dublin.

TO BE LET, with immediate possession, and direct from the Proprietor, a VERY VALUABLE

#### ANTHRACITE COLLIERY.

Situate in the Vale of Neath, Glamorganshire. The colliery is in thorough working order, and a new winning has just been effected very near to the levels mouth. The area of coal unworked is very extensive, and of excellent quality.

For further particulars, apply to Mr. T. B. ALLISON, Aberpergwm Estate Office, near Neath, Glamorganshire.

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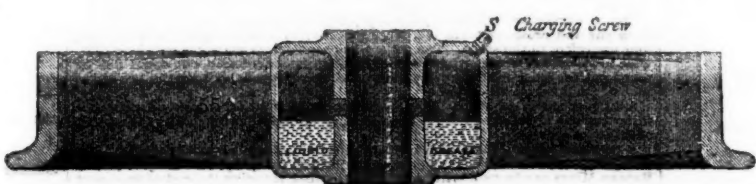
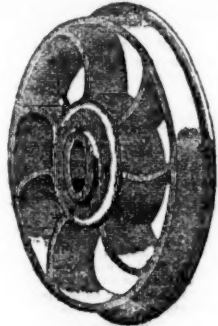


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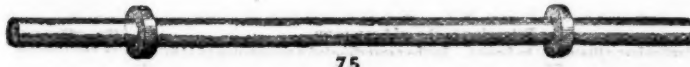
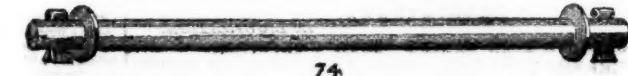
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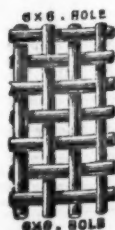
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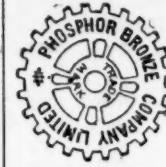
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11839 North Hendre, * 1, Wales.....	2 10 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
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6000 Tincroft, * 1, c, Pool, Illogan.....	11 10 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
16000 Van, * 1, Llanidloes.....	4 0 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
8000 W. Chiverton, * 1, Ferranabuloe.....	17 5 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
1782 West Pollice, * 1, St. Day.....	1 0 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
12 West Tolgus, * 1, Redruth.....	95 10 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
2018 West Wh. Frances, * 1, Illogan.....	29 6 3	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
600 West Wye Valley, * 1, c, Camborne.....	5 0 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
1024 Wh. Eliza Conrals, * 1, Montgomerie.....	3 0 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
2048 Wheel Jane, * 1, Kes.....	18 0 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
4295 Wheel Kitty, * 1, St. Agnes.....	5 13 10	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
80 Wheel Owles, * 1, St. Just.....	5 4 8	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
3000 Wheel Pevor, * 1, Redruth.....	173 15 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876
10000 Wye Valley, * 1, Montgomerie.....	7 11 0	2 1/2	2 1/2	10 10 0 0	0 2 0 0	Aug. 1876

## FOREIGN DIVIDEND MINES.

Shares.	Divid.	Last wk.	Clos. pr.	Total div.	Per sh.	Last pd.
35500 Almaden, * 1, Spain.....	2 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
50000 Almaden and Tinto Conrals, * 1, Spain.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
90000 Australian, * 1, South Australia.....	7 7 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
15000 Battle Mountain, * 1, c, (2240 part pd.).....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
15000 Birdseye Creek, * 1, California.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
20000 Cedar Copper Mining, * 1, c, Bo. Africa.....	7 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
24438 Cedar Creek, * 1, California.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
85000 Cosea Sul. Co., Romania, Italy.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
15000 Colorado, * 1, Utah.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
85000 Colorado United, * 1, c, Colorado.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
10000 Copiapo, * 1, Chile (250 shares).....	18 15 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
100000 Don Pedro North of the Key.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
25000 Eberhardt & Aurora, * 1, Nevada.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
70000 English & Australian, * 1, S. Aust.....	2 10 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
80000 Flagstaff, * 1, Utah.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
25000 Fortuna, * 1, Spain.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
85000 Frontino & Bolivia, * 1, New Gran.....	3 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
80000 Gold Run, * 1, c, New Gran.....	3 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
80000 Hercules and Roe, * 1, c, Colo.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
85000 Kapunda Mining Co. Australia.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
20000 Last Chance, * 1, Utah.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
15000 Linares, * 1, Spain.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
85000 London and California, * 1, c.....	2 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
8000 Mamm. Copperopolis of Utah, * 1, c.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
80000 Mountain Chief, * 1, Utah.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
100000 Mounting, * 1, France.....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
1000000 Port Phillip, * 1, c, Cluines (22 sh.).....	30 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
54000 Richmond Conrals, * 1, Nevada.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
40000 Santa Barbara, * 1, Brazil.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
120000 Scottish Australian Mining Co., * 1, c.....	9 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
80000 Scottish Austral. Mining Co., New.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
25000 Sierra Buttes, * 1, California.....	2 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
40826 St. B. Plumas Eureka.....	2 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
426300 St. John del Rey (25 stock & multiples dealt in).....	260 270	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
90000 Tolima, * 1, c, Bo. America.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
25000 Victoria (London), * 1, c, Austria.....	1 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
15000 Western Andes, * 1, c, New Granada.....	5 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876
21900 W. Prussia (8500 pref. sh. 101. pd.).....	10 0 0	2 1/2	2 1/2	1 19 9 0	0 2 0 0	Oct. 1876

## NON-DIVIDEND FOREIGN MINES.

Shares.		Divid.		Last wk.		Clos. pr.		Total div.		Per sh.		Last pd.	
NON-DIVIDEND FOREIGN MINES.													
Aores		Mines.		Paid.		Last Fr.		Clos. Fr.		Last Calif.			
12000	Argentine, <i>s</i> , Argentina Republic .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	12000	Pen-yr-helydd, <i>s</i> , Wales .....	12 00
30000	Blue Tent, <i>s</i> , California .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	7000	Pictou, <i>s</i> , Nova Scotia .....	7 00
10000	Buena Ventura, <i>s</i> , Liano de las Infantas, Spain (22 sh.) .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	80	Plaza D. .....	80
18000	Canada, <i>s</i> , Canada .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	600	Plymouth, <i>s</i> , Massachusetts .....	600
49935	Chontales, <i>s</i> , <i>s</i> , Nicaragua .....	1	15 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	12000	Plymouth, <i>s</i> , Massachusetts .....	12000
75000	Colombian Hydraulic, <i>s</i> , Colombia .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	10000	Port Nippon, <i>s</i> , Japan .....	10000
15000	Conrals of Chile, <i>s</i> , Chile .....	2	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	2000	Prideaux, <i>s</i> , Canada .....	2000
40000	English Australas., <i>s</i> , Victoria .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5182	Prince of Wales, <i>s</i> , Canada .....	5182
35000	Excelsior Hydraulic Gold Washing Co., California .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	6000	Reliance, <i>s</i> , Canada .....	6000
150000	Frontenac, <i>s</i> , <i>s</i> , (California) .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5000	Rhyolite, <i>s</i> , California .....	5000
100000	Frontenac, <i>s</i> , <i>s</i> , (California) .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	18000	Rockhope, <i>s</i> , Canada .....	18000
40000	Holcombe Valley, <i>s</i> , <i>s</i> , California .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	4000	Snowbush, <i>s</i> , Canada .....	4000
10000	Hornachon, <i>s</i> , <i>s</i> , Spain .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	3000	South Dakota, <i>s</i> , Canada .....	3000
12000	Huitfall, <i>s</i> , <i>s</i> , Orebro, Sweden .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	6000	South Devon, <i>s</i> , Canada .....	6000
20000	Imperial Consolidated, <i>s</i> , <i>s</i> , Utah .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	512	South Hill, <i>s</i> , Canada .....	512
7500	Imperial Brazilian Collieries, <i>s</i> , Brazil .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5000	South Molton, <i>s</i> , Canada .....	5000
100000	Isabelle, <i>s</i> , <i>s</i> , California (220 shares) .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	18000	South Norf., <i>s</i> , Canada .....	18000
50000	Javali, <i>s</i> , Nicaragua .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	6000	South Ros., <i>s</i> , Canada .....	6000
3500	La Mancha, <i>s</i> , Newfoundland .....	2	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	6000	South Tolo., <i>s</i> , Canada .....	6000
7500	Louisiana, Portugal (22 sh.) .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	937	South White., <i>s</i> , Canada .....	937
12000	Muenzenberg, <i>s</i> , Honnef, Germany .....	4	15 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	12000	Stedda, <i>s</i> , <i>s</i> , Canada .....	12000
9000	Missouri Lead Mining & Smelting, <i>s</i> , U.S. pref. (101 sh.) .....	4	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5000	St. Lawrence, <i>s</i> , Canada .....	5000
4000	New Benue, <i>s</i> , <i>s</i> , Germany .....	4	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	10000	St. Patrick, <i>s</i> , Canada .....	10000
2000	New Queensland, <i>s</i> , <i>s</i> , Venezuela .....	4	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	8000	St. Paul, <i>s</i> , Canada .....	8000
1000000	Nouvelle Kapanga, <i>s</i> , Congo .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	30000	Sunnyside, <i>s</i> , Canada .....	30000
3000	Oregon, <i>s</i> , <i>s</i> , Venezuela (Societe en commandite) .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	4000	Tamar, <i>s</i> , <i>s</i> , Canada .....	4000
60000	Panulicillo, <i>s</i> , <i>s</i> , U.S. (preference shares) .....	4	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	14000	Tessdale, <i>s</i> , <i>s</i> , Canada .....	14000
25000	Paterson United, <i>s</i> , <i>s</i> , Italy .....	4	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	10000	Teign Valley, <i>s</i> , <i>s</i> , Canada .....	10000
50000	Pitanguy, <i>s</i> , <i>s</i> , Brazil (incl. 6000 sh. \$1 fully paid) .....	3	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5000	Treleigh Way, <i>s</i> , <i>s</i> , Canada .....	5000
25000	Placerville, <i>s</i> , <i>s</i> , California .....	3	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	12000	Trethellan, <i>s</i> , <i>s</i> , Canada .....	12000
50000	Providencia and New Rosario, <i>s</i> , Mexico .....	2	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	640	Truro, <i>s</i> , <i>s</i> , Canada .....	640
40000	Ravenscliff, <i>s</i> , <i>s</i> , New Zealand; <i>s</i> , <i>s</i> , South Australia .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5000	Tyn-y-Fron, <i>s</i> , <i>s</i> , Canada .....	5000
22,181,000	Rio Tinto, <i>s</i> , <i>s</i> , Spain .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	6000	Ditto .....	6000
1000000	Rosa Grande, <i>s</i> , <i>s</i> , Brazil (21 shares) .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	10000	Van Conso, <i>s</i> , <i>s</i> , Canada .....	10000
25000	Ruby and Dunderberg, <i>s</i> , <i>s</i> , Nevada .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	1000	Vaughan, <i>s</i> , <i>s</i> , Canada .....	1000
2000000	Russo (10 p. c. debentures), <i>s</i> , <i>s</i> , Russia .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	15000	Victor, <i>s</i> , <i>s</i> , Canada .....	15000
30000	Seiten, <i>s</i> , <i>s</i> , <i>s</i> , Arlege, France .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	10000	West Asmet, <i>s</i> , <i>s</i> , Canada .....	10000
10000	Seiten, <i>s</i> , <i>s</i> , <i>s</i> , Arlege, France .....	10	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	8000	West Bassett, <i>s</i> , <i>s</i> , Canada .....	8000
40000	Tecoma, <i>s</i> , <i>s</i> , Utah .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	5800	West Comb., <i>s</i> , <i>s</i> , Canada .....	5800
43174	United Mexican, <i>s</i> , <i>s</i> , Mexico .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	7000	Ditto .....	7000
14000	Utah, <i>s</i> , <i>s</i> , Utah .....	1	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	3000	W. Craven, <i>s</i> , <i>s</i> , Canada .....	3000
50000	Virneberg, <i>s</i> , <i>s</i> , Rheinbreitbach, Germany .....	28	2 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	12000	West Gogina, <i>s</i> , <i>s</i> , Canada .....	12000
7000	Yorke Peninsula, <i>s</i> , <i>s</i> , South Australia .....	5	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	1000	West Holway, <i>s</i> , <i>s</i> , Canada .....	1000
64000	Yorke Peninsula, <i>s</i> , <i>s</i> , South Australia .....	3	0 0	2 1/2	2 1/2	1 19	9 0	0 2	0 0	Oct. 1876	3000	West Mary Ann, <i>s</i> , <i>s</i> , Canada .....	3000
											50000	West Millar, <i>s</i> , <i>s</i> , Canada .....	50000